

EXHIBIT G

Page 1

1 UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF NEW JERSEY
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5 MDL No. 16-2738 (FLW) (LHG)

6 IN RE: JOHNSON & JOHNSON
7 TALCUM POWDER PRODUCTS
8 MARKETING, SALES PRACTICES,
9 AND PRODUCTS LIABILITY LITIGATION
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14 The remote video deposition of WILLIAM LONGO,
15 Ph.D., taken via Zoom videoconference on
16 May 2, 2024, commencing at approximately
17 11:20 a.m., before Lois Anne Robinson,
18 Certified Realtime Reporter.
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<p style="text-align: right;">Page 3</p> <p>1 I N D E X</p> <p>2 EXAMINATION PAGE</p> <p>3 By Mr. Ewald 6</p> <p>4</p> <p>5 * * * * *</p> <p>6 EXHIBITS PAGE</p> <p>7 Exhibit 1 17</p> <p>8 Lizardite Standard</p> <p>9 Exhibit 2 17</p> <p>10 Antigorite Standard</p> <p>11 Exhibit 3 31</p> <p>12 Shu-Chun Su - "The Dispersion Staining Technique and Its</p> <p>13 Application to Measuring Refractive Indices of Non-Opaque</p> <p>14 Materials, with Emphasis on Asbestos Analysis"</p> <p>15 Exhibit 4 31</p> <p>16 Shu-Chun Su - "Rapidly and Accurately Determining Refractive</p> <p>17 Indices of Asbestos Fibers by Using Dispersion Staining</p> <p>18 Method"</p> <p>19 Exhibit 5 42</p> <p>20 Notice of Deposition</p> <p>21 Exhibit 6 43</p> <p>22 PSC Objections to Updated Notice of Deposition</p> <p>23 Exhibit 7 56</p> <p>24 Curriculum vitae</p>	<p style="text-align: right;">Page 5</p> <p>1 VIDEOGRAPHER:</p> <p>2 We are now on the record.</p> <p>3 My name is Maria Lima. I'm a</p> <p>4 videographer for Golkow.</p> <p>5 Today's date is May 2nd, 2024, and the</p> <p>6 time is 11:20 a.m. This remote video deposition</p> <p>7 is being held in the matter of Talcum Powder</p> <p>8 Litigation.</p> <p>9 The deponent is William E. Longo, Ph.D.</p> <p>10 All parties to this deposition are</p> <p>11 appearing remotely and have agreed to the witness</p> <p>12 being sworn in remotely. Due to the nature of</p> <p>13 remote reporting, please pause briefly before</p> <p>14 speaking to ensure all parties are heard</p> <p>15 completely.</p> <p>16 Counsel's appearances will be noted on</p> <p>17 the stenographic record.</p> <p>18 The court reporter will now swear in</p> <p>19 the witness.</p> <p>20</p> <p>21 WILLIAM LONGO, Ph.D.,</p> <p>22 the witness, after having first been</p> <p>23 duly sworn to tell the truth, the whole truth,</p> <p>24 and nothing but the truth, was examined and</p>

<p style="text-align: right;">Page 6</p> <p>1 testified as follows:</p> <p>2 EXAMINATION</p> <p>3 BY MR. EWALD:</p> <p>4 Q Good morning, Dr. Longo.</p> <p>5 A Good morning.</p> <p>6 Q It's been a while.</p> <p>7 A It has been a while.</p> <p>8 Q Okay. So let's get some of the</p> <p>9 logistics out of the way first.</p> <p>10 Well, first question is where are you</p> <p>11 today?</p> <p>12 A I am in -- I'm at the -- I'm at</p> <p>13 Materials Analytical Services, LLC, and I'm</p> <p>14 sitting in the second -- the small conference</p> <p>15 room.</p> <p>16 Q And is there anyone in the room with</p> <p>17 you?</p> <p>18 A Yes.</p> <p>19 Q Who?</p> <p>20 A Leigh O'Dell.</p> <p>21 Q Anybody else?</p> <p>22 A No.</p> <p>23 Q What --</p> <p>24 At least on the screen I see a number</p>	<p style="text-align: right;">Page 8</p> <p>1 analysis of fibrous -- fibrous talc and other</p> <p>2 information, William E. Longo, Ph.D., CEO, MAS,</p> <p>3 LLC, September 2nd, 2022.</p> <p>4 I'm fairly certain that this has</p> <p>5 been -- this has been provided in the past. And</p> <p>6 what we have here is, on table 2, is the RG-144</p> <p>7 Calidria spiked Johnson baby powder -- Johnson</p> <p>8 talcum powder samples where we did PLM analysis</p> <p>9 on the RG-144 spiked starting at table 2,</p> <p>10 .1 percent all the way down to .0001 percent.</p> <p>11 There's a typo there.</p> <p>12 Q Sorry. So the record's clear, what's</p> <p>13 the typo?</p> <p>14 A CSM, we also did a standard spike from</p> <p>15 .1 percent to .0001 percent, which that should be</p> <p>16 for the ISO. So this was our standardization on</p> <p>17 the number of structures of the Calidria going</p> <p>18 all the way down, and then we have some other</p> <p>19 information there that we've also provided.</p> <p>20 I have --</p> <p>21 Q Sorry, Doctor. Before we leave that</p> <p>22 one, I just want to make sure I understand the</p> <p>23 typo that you referred to on table 2, page 4, of</p> <p>24 this report. There's an extra zero on M65947?</p>
<p style="text-align: right;">Page 7</p> <p>1 of different stacks of paper. Can you generally</p> <p>2 describe for me what you have in front of you so</p> <p>3 I know what you have?</p> <p>4 A Well, I have the supplement expert</p> <p>5 report, MDL Johnson's Baby Powder, et cetera,</p> <p>6 et cetera, May 2nd, 2024, which just, on page --</p> <p>7 page -- on page 5, an overview, this supplement</p> <p>8 report was done to correct typographical errors</p> <p>9 involving the container calculations. And then I</p> <p>10 point out where those corrections were made and</p> <p>11 what was made. They're very minor, but there</p> <p>12 were some typos there on the number of</p> <p>13 containers. And that's the only thing I changed.</p> <p>14 Q Okay.</p> <p>15 MS. O'DELL:</p> <p>16 And, John, I will put that in the chat</p> <p>17 so you'll have it.</p> <p>18 MR. EWALD:</p> <p>19 Yeah. That'll be -- I was worried I</p> <p>20 was missing it. So, yes, that would be great to</p> <p>21 put it in the chat. Thank you.</p> <p>22 A I also have a report, PLM analysis,</p> <p>23 chrysotile RIs and structure size for MAS's</p> <p>24 RG-144 and SG-210 chrysotile standard in the</p>	<p style="text-align: right;">Page 9</p> <p>1 A It should be 0.001 percent, like the</p> <p>2 exact same number down there for the CSM.</p> <p>3 Q Okay.</p> <p>4 A That's one too many zeros there.</p> <p>5 Q Right.</p> <p>6 A And it's interesting. I always find</p> <p>7 that in the deposition when I'm explaining what</p> <p>8 we have.</p> <p>9 This was a -- we sent these in. I was</p> <p>10 just able to locate them, the request in the --</p> <p>11 it's the photographs for the lizard- --</p> <p>12 lizardite, which -- in 1.550, and the antigorite</p> <p>13 in 1.550 showing the difference that you get for</p> <p>14 chrysotile for that. That's a response to the...</p> <p>15 I also, starting over here, I have</p> <p>16 volume 69, second quarter, 2022, the published --</p> <p>17 the published paper for Dr. Shu-Chun Su in the</p> <p>18 journal called The Microscope, volume 69,</p> <p>19 hyphen -- I mean 69-2, pages 51 through 69, 2022,</p> <p>20 entitled "The Dispersion Staining Technique and</p> <p>21 Its Application to Measuring Refractive Indices</p> <p>22 of Non-opaque Materials, with Emphasis --</p> <p>23 Emphasis on Asbestos Analysis."</p> <p>24 And he gave a -- he had some</p>

<p style="text-align: right;">Page 10</p> <p>1 corrections in -- I think the following -- I 2 think the third quarter on the -- on the one 3 zero -- on the chrysotile. Yeah. Table 5, 4 conversion for chrysotile and Cargille, 1.550 5 corrected. 6 Okay. I have a document, big document 7 here, and this was stuff that was asked for in 8 the -- it's called a supplement expert report, 9 Comparison of RIs in chrysotile structure size, 10 Union Carbide SG-210 chrysotile products from the 11 Coalinga mine in California, Montana talc source 12 for both Gold Bond and Clubman body powder, 13 fibrous talc and reduced size NIST 1866b 14 chrysotile standard, October 9th, 2023. 15 Moving right along -- 16 Oh, I also have Dr. Su's handout that 17 he would -- when he inspected laboratories for 18 NVLAP, he would hand out a document called 19 "Rapidly and Accurately Determining Refractive 20 Indices of Asbestos Fibers by Using Dispersion 21 Staining Method." And this one is a revision of 22 2010-07-11. 23 I also brought along the ISO 22262-1, 24 Method Bulk -- Bulk -- you know, Bulk Material,</p>	<p style="text-align: right;">Page 12</p> <p>1 Asbestos -- next section is Asbestos in 2 talc fiber exposure tables, 1960 to 2000, Johnson 3 Baby Powder and Shower to Shower. 4 Then I have supplement expert report, 5 comparison of RIs in chrysotile -- chrysotile 6 structure size. Well, that's -- that's the 7 report part of that notebook. 8 The Valadez 228 analysis, that one 9 sample. I'll call it an off-the-shelf sample 10 that Joe Satterley sent me. 11 The report for Daniel Doyle, which, 12 again, was a analysis that was sent to me, I 13 believe, by Simon Greenstone. These were samples 14 that were analyzed for Chinese that were not in 15 the original MDL report. 16 What's next? 17 Analysis of Carolyn Weirick, 1.5-ounce 18 container. That came from Simon Greenstone. 19 Then I have analysis of 20 Johnson & Johnson talc products for amphibole 21 analysis, expert report. Oh, this is an oldie, 22 July 2018. I'm seeing who this came from. Oh, 23 Simon -- that's another Simon Greenstone. 24 The --</p>
<p style="text-align: right;">Page 11</p> <p>1 Part 1. 2 Somewhere in here I have the EPA R-93. 3 Here it is. I brought that along in case we need 4 it for any reason. 5 I have a giant notebook that -- and 6 that's my reliance materials as a first section. 7 Then we have my testimony list. 8 You have this, I think; right? 9 Q Well, we'll get to it. I'm not sure I 10 have your most up-to-date stuff. But, yes, we 11 have a version. 12 A I have the fourth supplement report of 13 William Longo, April 29th, 2024. And this one 14 was where -- yeah. I had to make a few 15 corrections, I think, in that. 16 My CV. 17 Analysis of Tamara Newsome's Johnson's 18 Baby Powder container, 11-17-23. So that's the 19 report. 20 The third supplement MDL report, 21 11-17-23. 22 Analysis of J&J's historical Imerys 23 railroad -- railroad samples that are in the 24 original February 1st, 2019, document.</p>	<p style="text-align: right;">Page 13</p> <p>1 Q Sorry. 2018 was a Simon Greenstone? 2 A Yes. 3 Q Okay. But it's amphibole? 4 A I didn't look at the results. 5 Q All right. 6 A Let me get past the chain of custody. 7 It was only for amphiboles. 8 Q Okay. And, just for the record, can 9 you give your internal control number, whatever 10 you call it, for that one? 11 A Oh. Our MAS lab tracking number? 12 Q Precisely. 13 A It's M68483. 14 Q Thanks. 15 A Then we have the Marie Cully supplement 16 report, M71046. And this was done on May 14th, 17 2020, revision 1. 18 I'll get the results and see what we 19 did. Oh. This went back -- this was -- went 20 back and did for -- for chrysotile. 21 Then we have Supplement Analysis Report 22 M- -- where is it? M71095. This is Janet 23 Tutley's JB container split, September 23rd, 24 2022, revision 2. And this was for chrysotile.</p>

<p style="text-align: right;">Page 14</p> <p>1 Where did we find it here? Analysis of talc 2 fibers as well. 3 Then we have Chinese talc analysis 4 report, revision 9-16-2022. Oh. These are -- 5 looks like it's M71109 to M71111. I believe 6 these are the -- the Chinese retains that we 7 received from -- 8 Who sent those to us? It might have 9 been either Seagrave or Sanchez, RJ Lee. 10 Then we have a supplement report 1, MAS 11 project M71166, off-the-shelf 2020 Johnson Baby 12 Powder talcum powder analysis. And these are the 13 ones that I purchased when they -- when the 14 product was still on the market. And they 15 came -- 16 Well, you can look at it. But I gave 17 you, you know, the M number. 18 Then we have the Shawn Johnson 19 Johnson Baby Powder analysis. That was the 10 20 containers that were purchased by Shawn Johnson's 21 mother and sent directly to us. 22 Then we have two Johnson Baby Powder 23 and one Gold Bond off-the-shelf containers from 24 Lucky's. And those would have come from Joe</p>	<p style="text-align: right;">Page 16</p> <p>1 And that's what's in that book. 2 Now, I just want to put this on the 3 record. It is my understanding that Judge 4 Wolfson excluded our PLM opinions about amphibole 5 asbestos during the Daubert hearing. While I 6 disagree that this -- this should have happened, 7 you know, what I would say about the PLM analysis 8 is that that hearing was four years ago, and 9 we've certainly advanced the science, advancement 10 in science on the PLM. I think some of the 11 issues she had I believe we've cured, you know, 12 but I'm always hesitant to violate -- violate 13 a -- a -- a -- a federal judge's order. So, you 14 know, I just have to go from there. 15 Q Okay. Thank you for that. And -- 16 All right. So first question after all 17 of that is the lizardite and antigorite 18 standards, you kind of trailed off, at least from 19 what I heard. Was that in response to recent 20 questions from my partner, Kevin Hynes? 21 A Well, I told Kevin Hynes I had them. 22 So, interesting enough, the -- the request for 23 them showed up in the deposition notice for here, 24 so I provided them.</p>
<p style="text-align: right;">Page 15</p> <p>1 Satterley, case of McLean, and it's M number 2 M71216. 3 The next one is Johnson Baby Powder 4 analysis, compiled notebook, 2-9-2021, MAS 5 project M71241. And these were all 2018 6 containers. And that means -- I think these were 7 ones that I purchased. Yeah. These -- these -- 8 these were purchased by me off -- off the 9 Internet from Ralph's, which is out in 10 California, I assume. 11 I also have in here the June 6th, 2019, 12 rebuttal expert report for the Prop 65. I don't 13 recall saying I was relying on this, but I guess 14 if you want to ask questions, that's fine. 15 Also, I have supplement report, two 16 off-the-shelf 2020 Johnson Baby Powder -- well, 17 Johnson Baby Powder analysis, MAS projects M71166 18 and M71180. These were containers purchased by 19 me from CVS in Suwanee, Georgia, and from 20 Walgreens from Johns Creek. And then I got a 21 sample in -- a full container from Target in Blue 22 Springs, Missouri. 23 The last one would be Linda Zimmerman, 24 supplemental analysis report, MAS project M70484.</p>	<p style="text-align: right;">Page 17</p> <p>1 Q All right. 2 A That was a long answer to your question 3 that should have been yes. 4 Q All right. And, so, you said you had 5 them. How long has -- 6 Well, let's first mark -- we'll go 7 ahead and mark as Exhibit 1 the -- 8 It's labeled the lizardite standard, 9 and Exhibit 2 will be the antigorite standard. 10 (DEPOSITION EXHIBITS 1 AND 2 11 WERE MARKED FOR IDENTIFICATION.) 12 MR. EWALD: 13 Q Doctor, the -- first, let's take 14 lizardite, Exhibit 1. How long has MAS -- 15 Let me rephrase that. 16 When was the lizardite standard created 17 by MAS? 18 A Well, it wasn't so much created. We 19 had lizardite and antigorite, as well as some 20 others, for a long time. In fact, we never 21 really ran into the issue. But soon as we 22 started identifying -- when we started 23 identifying chrysotile, these, of course, are two 24 polymorphs of chrysotile, and -- in the cosmetic</p>

<p style="text-align: right;">Page 18</p> <p>1 talc. I wanted to make sure that we weren't 2 misidentifying antigorite and/or lizardite and 3 see what the PLM ranges were for our standards we 4 had in-house. Because these standards have been 5 around for some time. We never really had to do 6 anything with them. But it was mostly for the 7 TEM folks to take a look at, if we needed to. 8 Now, when we did this would have been 9 back in 2020 or 2021. 10 Q And when you say -- 11 Hold on. This is always interesting 12 when you try to put something on screen. Let's 13 see how this goes. 14 Do you see the lizardite standard on 15 your screen, Doctor? 16 A I do. 17 Q All right. When you say you did this 18 in 2021, are you testifying that the document 19 that was marked as Exhibit 1 was created in 2020, 20 2021 time frame? 21 A Yes. Somewhere where we started 22 finding the -- the size of the -- size of the 23 chrysotile structures, I wanted to make sure we 24 weren't misidentifying the polymorphs. It's</p>	<p style="text-align: right;">Page 20</p> <p>1 fibrous talc misidentification. 2 Q To be so clear, because I wasn't sure 3 from your answer, what we've marked as Exhibit 1 4 that is -- hold on -- 5 images labeled "lizardite 5 standard," that was -- those images were created, 6 photographed in 2020, 2021 time frame? 7 A Yes, sir. 8 Q Okay. 9 A In 1.550. And these would have been 10 with the old microscopes. 11 Q And the -- you said you had the 12 lizardite, antigorite standards around for a 13 while. What is the -- what is the source of the 14 lizardite, antigorite standards? 15 A You know, it's been so long, I would 16 have to look it up and see if we actually -- what 17 the source was. I mean, I literally haven't 18 looked at these in two, three years. 19 If you'll notice, you know, a lot of 20 our reports, besides identifying chrysotile by 21 PLM, is also showing what the birefringence and 22 the difference in the fibrous talc. But we just 23 don't really run across these materials. 24 Number 1, antigorite, in the</p>
<p style="text-align: right;">Page 19</p> <p>1 either 2020 or 2021. And it was clearly that it 2 was different, so -- and because nobody 3 suggested, none of the defense experts suggested 4 that we were misidentifying either antigorite 5 or -- or lizardite, all -- all the -- all the 6 opinions that we were misidentifying fibrous talc 7 as chrysotile. 8 So we spent all our research time 9 looking at fibrous talc, looking at how the 10 birefringence is so different from chrysotile, we 11 just sort of stuck these away. 12 Now, if the defense experts' opinions 13 are now changing, that they want to abandon the 14 chrysotile, their opinions after two-and-a-half 15 years of saying we're misidentifying fibrous talc 16 for chrysotile, and now they're saying, well, 17 it's antigorite or lizardite, you know, that'll 18 be up to them to explain why they're changing 19 their minds. 20 So we just -- I just put them away and 21 kind of forgot about them. It wasn't until your 22 colleague asked about them and I go, "oh, yeah, 23 we've got those." But we've never really had to 24 do anything with them, because it was all about</p>	<p style="text-align: right;">Page 21</p> <p>1 Environmental Protection Agency book that has 2 been read back to me many times, in the section 3 called "Asbestiform, Nonasbestiform," in the 4 AHERA, and it says antigorite is the 5 nonasbestiform. 6 Well, we all know it can be fibrous 7 from time to time, but we haven't seen this in 8 the PLM analysis. So that's the reason it's 9 really never come to light, meaning it wasn't 10 really important, because this is not what we had 11 been accused of misidentifying. 12 Q Well, in your -- 13 Well, first of all, the -- in the slide 14 at the bottom, it says "antigorite" and, in 15 parentheses, "Ontario." Is it your understanding 16 that the standard for antigorite that MAS used 17 originated from Ontario? 18 A Yes. And that would -- 19 Well, so this -- I'm sure, you know, 20 the Ontario chrysotile up there is all 21 serpentine, originated from serpentine, and this 22 would be a serpentine. So that's my 23 understanding. It came from Ontario -- from the 24 Ontario mines up there.</p>

<p style="text-align: right;">Page 22</p> <p>1 Q And, so, we were looking at page 1 of 2 Exhibit 1 for lizardite. At the top we have RA 3 values of 1.567 to 1.585. That's what's written; 4 correct? 5 A Correct. 6 Q And is that your understanding of the 7 range of RI values for antigorite -- for 8 lizardite when looking at it in parallel 9 position? 10 A It's in that range of them. And, you 11 know, here we have the 1.67. You've got more of 12 the orangish-red. That's -- 13 And then on the upper side here, we've 14 got these whites in here. So that gives you the 15 1.585. If you were to average that, that's going 16 to be 6, 7, 10 -- yeah. That's gonna be in the 17 high 1.5 -- 18 Well, instead of me just guessing, it's 19 probably going to give you an average refractive 20 indices -- 21 1.567, 5 -- is 12 -- 7, 1.527 versus 22 1.585. I mean 80. So you're gonna be in the 23 1.5 -- let's see -- 9, 3, 8, 4, 7, 5, 6, 6. 24 1.8576. So that's outside the range we've ever</p>	<p style="text-align: right;">Page 24</p> <p>1 Q It's your testimony that when you 2 were -- when MAS was analyzing talc samples by 3 PLM for the presence of chrysotile, that you 4 referred to these lizardite and antigorite 5 samples? 6 A Yes. We took a look at this and go, 7 well, we're not seeing anything close to that. 8 Now, you may get -- 9 Because you've got, basically, very 10 close refractive indices on both the 11 perpendicular and parallel, but you've got the 12 wrong wavelengths. I mean, if you were to go 13 into the chart that likes to be shoved in my face 14 all the time for the ISO chart, when it says 15 1.550 for chrysotile and take a look at the 16 central stop data, and the -- you're gonna be -- 17 you're gonna be outside of the range. 18 Q Okay. And -- 19 A For the 1.56, you know, it's -- you're 20 not getting the same dispersion colors. 21 Now, we can argue over the gold and 22 yellow, et cetera, but you're not gonna find any 23 Calidria that looks like that. And, again, this 24 was just put away because it was never suggested</p>
<p style="text-align: right;">Page 23</p> <p>1 seen for chrysotile. 2 But, more importantly, if you go to the 3 perpendicular, no matter if you're -- you know, 4 you're always getting the blues, and we're not 5 here. We've got 1.563 to 1.582 -- 1.563, 82 -- 6 Two and 3, that's 5...and 1.645. 7 No. It's got to be harder than that. 8 Oh. 1.615. 9 Let me just do the math on the 10 calculator before I screw up. 11 Q Feel free. 12 A I didn't bring it. 13 Anyway, you're not getting any of the 14 what I would call the blues that you typically 15 see in 1.550, so you have -- you have -- your 16 refractive indices are way too high for it to 17 be -- 18 You're getting close now to what you 19 might see for talc. 63 to 82, you know, you 20 take -- you take the 1.585, it doesn't -- it 21 doesn't work. I mean, those colors, it doesn't 22 work. You know, I haven't done the math on it, 23 but the refractive indices are way too high to be 24 chrysotile. Way too high.</p>	<p style="text-align: right;">Page 25</p> <p>1 that MAS was misidentifying antigorite or 2 lizardite as chrysotile. It was all fibrous 3 talc. Fibrous talc. Or for the -- for the 4 experts who say there is no fibrous talc, it was 5 all talc plates on edge. 6 Q In any of your reports or analysis of 7 talc by PLM for chrysotile, did you reference 8 that you ruled out antigorite and lizardite as a 9 possibility? 10 A No. Because right off the bat we were 11 being accused of misidentifying it fibrous talc. 12 That's in -- just about in every report. Because 13 this is why they say -- 14 And then I was rebutting it as why 15 they're wrong. 16 Nobody has ever said that we're 17 misidentifying chrysotile for lizardite and 18 antigorite. And here is an interesting one, 19 because this lizardite actually has a few pieces 20 of -- 21 Since it's a polymorph, you can get 22 either or, or you can get a little bit of both. 23 We show -- can show the little pieces on here 24 where we have reddish-magenta to blue, which</p>

<p style="text-align: right;">Page 26</p> <p>1 pretty much would put it into the -- as 2 chrysotile. But the majority of it is not, you 3 know, because the majority of the rest of this is 4 the lizardite. 5 Q So this is, looking now at Exhibit 2, 6 you're describing slide 1, and the -- it's -- the 7 title of the slide is "antigorite standard." 8 Correct? 9 A Antigorite? I thought this was the 10 lizardite one? 11 Q You see at the top "antigorite 12 standard"? I'm not -- I'm just looking at what 13 you are telling me, Doctor. 14 MS. O'DELL: 15 You moved from Exhibit 1 to Exhibit 2. 16 MR. EWALD: 17 I did, yes. And I identified this as 18 Exhibit 2. 19 MS. O'DELL: 20 Okay. I just wanted to make sure we 21 were on the same -- 22 MR. EWALD: 23 Yeah. 24 A If you go down to the bottom --</p>	<p style="text-align: right;">Page 28</p> <p>1 A It's lizardite. If you look at -- 2 MS. O'DELL: 3 If I could -- 4 THE WITNESS: 5 I'm sorry. 6 MS. O'DELL: 7 I think this confusion, the files 8 were -- were -- the names were transposed. So 9 the file that says lizardite -- and Dr. Longo can 10 confirm this -- actually has antigorite, and the 11 file named antigorite actually has lizardite. So 12 just so -- 13 THE WITNESS: 14 We have the appropriate name on the 15 photographs. 16 MS. O'DELL: 17 Yes. The appropriate name's on the 18 photograph. 19 THE WITNESS: 20 My assistant, when I said please scan 21 these, got a little confused. 22 MS. O'DELL: 23 Yeah. So we correct that -- 24 MR. EWALD:</p>
<p style="text-align: right;">Page 27</p> <p>1 If you scroll up just a tad -- 2 There you go. Bundle of lizardite. 3 MR. EWALD: 4 Q Okay. So -- 5 And the record will reflect, one way or 6 another, I got these about, you know, a couple 7 minutes before the deposition, so I'm seeing this 8 for the first time. But, Doctor, all of these in 9 this -- we marked as Exhibit 2 that's labeled 10 "antigorite standard," these are all, in fact, 11 lizardite? 12 A Yeah. It's -- 13 You know, if you look at our PLM 14 analysis, we give you, you know, dispersion 15 staining, both, you know, perpendicular and 16 parallel. Then we do cross-polars. Excuse me. 17 Then we do elongation, then cross-polars and then 18 no pol- -- then no polars. That's pretty 19 standard of what we do for anything we're doing 20 with PLM. 21 Q Right. But what we're looking at here, 22 the images, even though the title says 23 "antigorite standard," what we're looking at are 24 images of lizardite. Fair?</p>	<p style="text-align: right;">Page 29</p> <p>1 That's fine. I'm just trying to make 2 sure the record's clear. I appreciate that. 3 So -- all right. 4 MS. O'DELL: 5 So, John, do you mind, for clarity, 6 (garbled Zoom) lizardite in Exhibit 2 is 7 antigorite, is what I heard earlier, and so the 8 record will reflect that the appropriate images 9 will go to that exhibit number. Sorry for the 10 confusion. 11 MR. EWALD: 12 That's okay. You did break up a little 13 bit there, but I think what you're saying is 14 however they're labeled or not, Exhibit 1 is, in 15 fact, antigorite standard, and Exhibit 2 is, in 16 fact, lizardite standard. Correct? 17 MS. O'DELL: 18 Either way. Just so it's clear. I 19 mean, you named the first one Exhibit 1 was 20 lizardite, and Exhibit 2 was antigorite. We just 21 need clarity that those are actually what's 22 being, you know (garbled Zoom) -- 23 MR. EWALD: 24 I know. And so what I'm saying is --</p>

<p style="text-align: right;">Page 30</p> <p>1 it is confusing. But for Exhibit 1, I marked 2 what was labeled lizardite standard but we've now 3 determined is, in fact, antigorite standard. 4 And, so, Exhibit 1 will be the antigorite 5 standard, and Exhibit 2 will be the lizardite 6 standard. Okay? 7 MS. O'DELL: 8 That's great. 9 MR. EWALD: 10 Great. 11 Q All right, Doctor. The two Su articles 12 that you mentioned that you had in front of you, 13 are those articles that you previously referred 14 to in litigation? 15 A Yes. One -- one is -- one is an 16 actually peer-reviewed publication, and that's 17 the 2022 one from -- in Microscope. And then the 18 other one is a handout he would typically give 19 out to labs that -- that just goes back to -- all 20 the way to, you know, 19- -- 1918? Not 1918. 21 1980s or so or '90s. And it is just a handout. 22 Essentially, some of the same information he has 23 in his publication, same charts, same look-up 24 tables, et cetera.</p>	<p style="text-align: right;">Page 32</p> <p>1 looked them up. But, yeah, we -- we've had a 2 number of these, but I didn't know if I had 3 the -- this was like almost -- yeah, the 2010 4 one. But they're all basically the same. So I 5 just put this one in as an example if we have to 6 discuss the -- what I would call is -- is 7 determining asbestos refractive indices by 8 dispersion staining, stages 4A and 4B, and 9 compare those to the tables that we produced -- 10 not produced but he had a, you know, QR code on 11 his paper where you could download all the -- the 12 determining asbestos refractive indices for 13 dispersion staining either in Cargille E or 14 another type. And if you compare those two 15 charts or those two look-up tables, they are 16 literally identical. 17 Q And, so, then, in your -- I guess the 18 question is: In your view, what does what we 19 marked as Exhibit 4 add to the opinions you're 20 offering with respect to PLM and chrysotile? 21 A Well, first off, if we go to the -- if 22 we go -- 23 Is Exhibit 4 the actual peer-reviewed 24 paper?</p>
<p style="text-align: right;">Page 31</p> <p>1 So, yes. So these are what I've been 2 relying on a while about Dr. Su. 3 Q Okay. And, so, we'll mark as Exhibit 3 4 the Su 2022 Microscope "Dispersion Staining 5 Technique and Its Application to Measuring 6 Refractive Indices of Non-Opaque Materials, With 7 Emphasis on Asbestos Analysis." 8 (DEPOSITION EXHIBIT NUMBER 3 9 WAS MARKED FOR IDENTIFICATION.) 10 MR. EWALD: 11 Q Doctor, is the highlighting that we see 12 on the version that I received yours? 13 A It is. 14 Q And, then, on Exhibit -- we'll mark 15 Exhibit 4 the -- also by Dr. Su, the "Rapidly and 16 Accurately Determining Refractive Indices of 17 Asbestos Fibers By Using Dispersion Staining 18 Method." 19 (DEPOSITION EXHIBIT NUMBER 4 20 WAS MARKED FOR IDENTIFICATION.) 21 MR. EWALD: 22 Q Doctor, on this one, is this a copy 23 that you had received at MAS? 24 A Well, I think I went and looked -- and</p>	<p style="text-align: right;">Page 33</p> <p>1 Q Exhibit 4 is the rapid paper. Exhibit 2 3 is the -- 3 A Okay. Exhibit 3, we have been -- 4 To verify that our refractive indices 5 for the chrysotile was in the range, what was 6 found for chrysotile, and not just have everybody 7 working off the 1866b National Institutes of 8 Standard Technology standard for chrysotile that 9 came from Black Lake area up in Canada -- 10 And it was always pointed to that one 11 of the reasons we were misidentifying chrysotile 12 is that we didn't have -- we weren't getting the 13 same refractive indices that are for the NIST 14 1866b standard. And, so, when we start looking 15 at Dr. Su's Rapidly and Accurately Determining 16 Refractive Indices of Asbestos Fibers from -- 17 actually gave out, we could see that the ranges 18 that we're finding were actually in his -- in his 19 charts. 20 But then it was stated that we were 21 misusing his -- that wasn't what it's for. So 22 now he publishes a paper, and on page 51 he says, 23 that highlighting there, "this paper presents a 24 practical procedure for the measurement. To</p>

<p style="text-align: right;">Page 34</p> <p>1 facilitate the analysis, two comprehensive suites 2 of precalculated look-up tables for the 3 conversion of the observed matching wavelength to 4 RI were constructed for the two major types of RI 5 liquids: Cargille" -- which we use, and then the 6 DRIMMC. 7 Well, it doesn't say anything in there 8 that these tables are only for cal- -- for 9 mathematical calculations or anything. And the 10 Exhibit 3 versus the Exhibit 4, they're 11 identical. 12 Also, I think very important -- 13 Let's see where that is. And, 14 hopefully, I can find it. Oh, here we go. 15 On page 56 of the document, "select a 16 proper RI liquid to mount the sample." People 17 have been asked repeatedly why did I change from 18 1.550 to 1.560? Well, if you read what he says 19 here for my highlight, he says "for high-accuracy 20 measurements such as a regulatory, legal, and 21 forensic analysis, et cetera, the rule of thumb 22 is to choose RI liquids as close as possible to 23 the refractive indices that will be measured. 24 For example" --</p>	<p style="text-align: right;">Page 36</p> <p>1 Now, he also produces a table of 1.565. 2 Oh, he doesn't have -- he has a 1.56, you know, 3 RI liquid. So we went to 1.560 based on this 4 statement right here from Dr. Su. That's the 5 main reason I rely on this, because here we 6 have -- we have a very -- you know, what has been 7 stated as a very knowledgeable scientist talked 8 about the higher refractive indices that we have 9 been seeing in gamma for the chrysotile finding 10 in the cosmetic talcs, as well as the chrysotile 11 Union Carbide product, SG-210. They're almost in 12 identical range. That's -- this is what I 13 primarily rely on for this particular 14 peer-reviewed publication. 15 Q The -- you just gave a range of what 16 refractive indices MAS -- the finding in its PLM 17 analysis of chrysotile J&J products in the gamma 18 position as 1.56 to 1.569? Is that what you 19 stated? 20 A That's the typical range. Yes. One 21 time -- sometimes you'll see a 1.570 or 1.571. 22 Sometimes we'll see a 1.5- -- 1.559, 1.558. But 23 typically where we end up is that 1.560 up to 24 1.569. And that's why we chose the 1.560.</p>
<p style="text-align: right;">Page 35</p> <p>1 Now, I think this is the most important 2 statement in here. 3 -- "there are chrysotile minerals who 4 [sic] RIs are significantly higher than those of 5 the standard chrysotile from the NIST SR [sic] 6 1866 set." 7 And if you go down further, "in that 8 case, 1.55 -- 1.555 or 1.560, instead of the 9 1.550, RI liquid should be used to determine a 10 gamma." 11 Right here, one of the premier experts, 12 in his published peer-reviewed paper, is stating 13 that there will be higher -- significantly higher 14 refractive indices than found for the standard 15 chrysotile NIST. 16 In my opinion, this statement from a 17 peer-reviewed publication validates everything 18 I've been saying for the last two-and-a-half 19 years. 20 And because our average range of 21 refractive indices, RIs, are from about 22 approximately 1.560 to 1.569, sometimes 1.70, if 23 you average all our RIs out, we have a refractive 24 indice [sic] of 1.560.</p>	<p style="text-align: right;">Page 37</p> <p>1 It also was suggested -- well, it was 2 also stated by Mickey Gunther that we needed to 3 use a higher refractive indice [sic] fluid to 4 validate that we're finding chrysotile, as well 5 as Adam Seagrave. And can't remember if Sanchez 6 said it or not, Dr. Sanchez. 7 So to me, this validates what we were 8 doing, a published paper stating that we had the 9 appropriate -- that the higher refractive 10 indices -- 11 And, more importantly, it says here 12 "for higher-accuracy measurements." So now in 13 the 1.560, we're seeing more of the 1- -- of in 14 the low range of the chrysotile for the 15 birefringence, which it's supposed to be. So 16 it's more accurate using this. 17 So we're probably gonna try 1.565 at 18 some point, but we have to generate a table for 19 it. So I don't know when we'll do that. 20 Q When you say "generate a table," how 21 would you go about generating a table for 1.565? 22 A Same way Dr. Su did. Just calculate 23 it. You take -- 24 Q How do you calculate it?</p>

<p style="text-align: right;">Page 38</p> <p>1 A So you have 1.60 and you have a 1.550. 2 I think we have a 1.55 in here somewhere. But 3 you can just cal- -- you can just calculate it. 4 Alls you have to do is put all the parameters in, 5 you know, wavelength in. There's a simple 6 formula for it. 7 Now, you're gonna ask what that formula 8 is. I'm gonna look it up so I don't make a 9 mistake. 10 Q Okay. So, sitting here today, you 11 don't know what the formula is to create the 12 table for 1.565; correct? 13 A Well, I don't know it verbatim, and -- 14 I can give you certain parts of it, you know. 15 You've got -- you've got to -- obviously, you've 16 got to have the wavelengths. You're gonna have 17 to have -- 18 What is the other two variables? I 19 can't think. I'll know it pretty well when I put 20 a 1.565 table together, because that's probably 21 the better refractive fluid since the average of 22 what we're seeing is 1.565. 23 Q And I take it MAS would have to create 24 a table for 1.565 because you're not aware of</p>	<p style="text-align: right;">Page 40</p> <p>1 mentioned that this Exhibit 4 has the same tables 2 that come up on the QR code; correct? 3 A Correct. 4 Q Is there anything else with respect to 5 this article -- I'm sorry. 6 Well, withdrawn. 7 Is there anything else with respect to 8 what we marked as Exhibit 4 that you're relying 9 on for your opinions with respect to PLM 10 chrysotile analysis? 11 A Oh. 57. 12 Q And now we're back to Exhibit 3; right? 13 The 2022 article? 14 A Yes. 15 Q Okay. 16 A Constantly I have been shown one of 17 Dr. Su's handouts where he said stay away from 18 yellow. Don't do yellow. Stay away from yellow. 19 Bad, yellow. 20 And here we have, on page 57, for an 21 experienced analyst, one can assign the color to 22 be 4.60 [sic] nanometer if closer to golden 23 yellow or 480 nm meters if closer to orange. And 24 that's something I've been arguing about that.</p>
<p style="text-align: right;">Page 39</p> <p>1 anywhere in the published literature that such a 2 table exists? 3 A Well, I was just gonna go with, you 4 know, what Dr. Su did, just do the calculations. 5 Q But my question is -- 6 A I'm -- 7 Q Sorry. Go ahead. 8 A I have not seen a table for 1.565. 9 Q And we're looking at the part that you 10 highlighted here. It's on page 56, as you 11 mentioned, of what we marked as Exhibit 3. The 12 remains that you said you get the most often for 13 the RI in the gamma direction is 1.560 to 5 -- 14 1.569, and everything from 1.561 to 1.569 is 15 above 1.560; correct? 16 A Yes. 17 And, as I was saying, the average is 18 1. -- the average comes out, typically -- 19 I think I went through, you know, what 20 we saw for the SG-210, the average data we saw 21 for Gold Bond, and what we saw for the -- well, 22 Montana talc, primarily. 23 Q All right. The -- I just want to be -- 24 before we leave what we marked as Exhibit 4, you</p>	<p style="text-align: right;">Page 41</p> <p>1 An experienced analyst can do this; that yellows 2 are not bad. 3 And, again, that goes -- that is 4 different than what he says in his handouts. So 5 it's a little confusing. 6 But I'm assuming that a peer-reviewed 7 publication is more authoritative than a handout 8 that -- given to PLM labs. 9 Let me see if there's anything else in 10 here that I find interesting. I think those were 11 the main points. 12 Q If we go to page 64 of Exhibit 3, 13 there's a table 6, and talks about selection of 14 DRIMMC immersion liquids for asbestos analysis. 15 You have some highlighting there, and you have 16 something that's circled with what appears to be 17 1.545. What are you indicating there? 18 MS. O'DELL: 19 Page 54, John? Is that right? 20 MR. EWALD: 21 Exhibit 3. 22 MS. O'DELL: 23 63. 24 MR. EWALD:</p>

<p style="text-align: right;">Page 42</p> <p>1 Page 64. It's Exhibit 3.</p> <p>2 A My copy doesn't have that, but I sent</p> <p>3 that electronically. I'm not sure why I put that</p> <p>4 1.545 on there. I'm looking at his charts and</p> <p>5 1.550.</p> <p>6 MR. EWALD:</p> <p>7 Q Okay. And, so, when on this chart</p> <p>8 you've highlighted, under the high accuracy</p> <p>9 required, regulatory, litigation, forensic,</p> <p>10 et cetera, for chrysotile in the gamma direction,</p> <p>11 it lists 1.550, 1.560; correct?</p> <p>12 A For routine samples. Then we have</p> <p>13 1.550, 1.560, and then it has a little asterisk.</p> <p>14 And if you go down to the bottom, "there are</p> <p>15 chrysotile minerals whose refractive indices are</p> <p>16 higher than those of the NIST SRM 1866</p> <p>17 chrysotile." So I don't see anything</p> <p>18 inconsistent there.</p> <p>19 Q All right. Let's mark as Exhibit 5 the</p> <p>20 updated Notice of Oral and Videotaped Deposition</p> <p>21 of William Longo, Ph.D., Duces Tecum, Notice to</p> <p>22 Preserve and Notice of Inspection. That will be</p> <p>23 Exhibit 5.</p> <p>24 (DEPOSITION EXHIBIT NUMBER 5</p>	<p style="text-align: right;">Page 44</p> <p>1 was -- there was an initial notice sent. There</p> <p>2 was some confusion on whether there was actually</p> <p>3 a second notice. So it's the same one yesterday.</p> <p>4 So --</p> <p>5 MR. EWALD:</p> <p>6 Q Okay. And, Doctor, if we go to the</p> <p>7 responses, you see, for example, on number 20, so</p> <p>8 we're at page 11, all materials related to your</p> <p>9 or your laboratory's testing of Johnson's Baby</p> <p>10 Powder or Shower to Shower, including but not</p> <p>11 limited to, and then it has a number of different</p> <p>12 specific subparts, the response states, after</p> <p>13 some objections, "without waiving said</p> <p>14 objections, any materials in response to this</p> <p>15 request have already been produced during the</p> <p>16 talcum powder litigation and, therefore, are</p> <p>17 already in the possession of defendants.</p> <p>18 Otherwise, Dr. Longo is not aware of any</p> <p>19 responsive documents."</p> <p>20 Did I read those sentences correctly?</p> <p>21 A You did.</p> <p>22 Q And, so, where the responses and</p> <p>23 objections state "otherwise, Dr. Longo is not</p> <p>24 aware of any responsive documents other than what</p>
<p style="text-align: right;">Page 43</p> <p>1 WAS MARKED FOR IDENTIFICATION.)</p> <p>2 MR. EWALD:</p> <p>3 Q And then I'll mark as Exhibit 6 the</p> <p>4 Plaintiffs' Steering Committee's Responses and</p> <p>5 Objections to the Updated Notice of Oral and</p> <p>6 Videotaped Deposition of William Longo, Ph.D.</p> <p>7 Duces Tecum, Notice to Preserve and Notice of</p> <p>8 Inspection.</p> <p>9 (DEPOSITION EXHIBIT NUMBER 6</p> <p>10 WAS MARKED FOR IDENTIFICATION.)</p> <p>11 MR. EWALD:</p> <p>12 Q Let me go ahead and share my screen.</p> <p>13 And, Doctor, what I put up here is the Exhibit 6,</p> <p>14 plaintiff's responses to the updated notice. Did</p> <p>15 you have an opportunity to review the updated</p> <p>16 notice of oral and videotaped deposition of</p> <p>17 yourself, notice to preserve and notice of</p> <p>18 inspection?</p> <p>19 A Yes.</p> <p>20 Q When did you review it?</p> <p>21 A Yesterday.</p> <p>22 Q And --</p> <p>23 MS. O'DELL:</p> <p>24 Just for the record, as you know, there</p>	<p style="text-align: right;">Page 45</p> <p>1 has already been produced in the talcum powder</p> <p>2 litigation," is that something that you agree</p> <p>3 with?</p> <p>4 MS. O'DELL:</p> <p>5 Just let me interject, just a brief</p> <p>6 objection. Number 1, I would add to this that</p> <p>7 we've provided a Dropbox with a number of</p> <p>8 materials in it, all of the materials that were</p> <p>9 listed on Dr. Longo's materials considered list,</p> <p>10 and we continue to add to that.</p> <p>11 So subject to that objection, with what</p> <p>12 the objection is, you're welcome to ask Dr. Longo</p> <p>13 specific questions. But the objections are the</p> <p>14 lawyer's objections, not Dr. Longo's objections.</p> <p>15 And, so --</p> <p>16 MR. EWALD:</p> <p>17 Right. And I appreciate that. But I'm</p> <p>18 not talking about objections. I'm talking about</p> <p>19 the statement in the document that Dr. Longo is</p> <p>20 not aware of any responsive documents other than</p> <p>21 what has been produced in talcum powder</p> <p>22 litigation.</p> <p>23 Q And so my question to you, Dr. Longo,</p> <p>24 is whether that is a true statement.</p>

<p style="text-align: right;">Page 46</p> <p>1 A That is a true statement.</p> <p>2 Q Okay.</p> <p>3 A Now, we have a chart of all our J&J</p> <p>4 testing that has been provided to defendants. If</p> <p>5 I were to stack up the notebooks that -- you</p> <p>6 know, just -- just taking a look at the -- all</p> <p>7 the historic -- the J&J historical samples, where</p> <p>8 we have 19- -- you know, 1960, 1970, 1980, 1990,</p> <p>9 2000s up to 2002 or 2003, and, before that, it</p> <p>10 was maybe 50-some samples from eBay, et cetera.</p> <p>11 And then after, you know, Johnson & Johnson, the</p> <p>12 only additional samples we did -- because, you</p> <p>13 know, Johnson & Johnson was in bankrupt [sic] for</p> <p>14 two years -- was the -- you know, the Alphadet --</p> <p>15 MS. O'DELL:</p> <p>16 Valadez?</p> <p>17 A -- Valadez -- excuse me -- was a</p> <p>18 sample, and a couple more for the -- for the MDL,</p> <p>19 for some of the containers for the -- you know,</p> <p>20 for this project. There's nothing else. We</p> <p>21 provided all the -- you know, all the selected</p> <p>22 area electron diffraction patterns, all the ADXA.</p> <p>23 There's nothing else.</p> <p>24 MR. EWALD:</p>	<p style="text-align: right;">Page 48</p> <p>1 it right there.</p> <p>2 So we consider SOPs confidential and</p> <p>3 company records. We don't turn over SOPs, and</p> <p>4 not too many experts do.</p> <p>5 Q Sorry, Doctor. I didn't follow -- I</p> <p>6 got the last part. But the part before that, you</p> <p>7 mentioned you're one of the few labs, something</p> <p>8 about turnover? I wasn't sure what you were</p> <p>9 talking about. Sorry.</p> <p>10 A I think we're one of the few labs that</p> <p>11 put a very extensive materials and methods</p> <p>12 section in just to go through each step of what</p> <p>13 we do. And using those materials/methods</p> <p>14 section, anybody could duplicate the analysis.</p> <p>15 Q And when you say materials and methods</p> <p>16 section, you're referring to the materials and</p> <p>17 methods section in your expert report; right?</p> <p>18 MS. O'DELL:</p> <p>19 Reports.</p> <p>20 A In every report we have. From</p> <p>21 receiving the sample to weighing it out, to --</p> <p>22 you know, through the -- out of the -- you know,</p> <p>23 through the muffle furnace to get rid of the</p> <p>24 organics, to weighing it, then going and doing</p>
<p style="text-align: right;">Page 47</p> <p>1 Q All right. Looking at request 31 in</p> <p>2 what we marked as Exhibit 6, it asks for all</p> <p>3 standard operating procedures (SOPs) maintained</p> <p>4 by your laboratory for testing bulk materials for</p> <p>5 asbestos by PLM, TEM, and SEM.</p> <p>6 And, Doctor, my question to you is:</p> <p>7 Does MAS maintain any standard operating</p> <p>8 procedures for the testing of talc samples by PLM</p> <p>9 for the presence of chrysotile?</p> <p>10 A No. We haven't finished the standard</p> <p>11 operating procedures because we keep doing</p> <p>12 research and changing slight -- slight</p> <p>13 conditions, so -- until we finally have.</p> <p>14 But what I may -- but what we do</p> <p>15 provide, in every analysis we do have chrysotile</p> <p>16 has materials and methods section that anybody</p> <p>17 can follow, and it doesn't really have --</p> <p>18 If we had written SOPs for every time</p> <p>19 we made a change, it wouldn't really change</p> <p>20 any -- it -- you know, it really wouldn't give</p> <p>21 any additional information. That's why I think</p> <p>22 we're one of the few laboratories, when they do</p> <p>23 an analysis, they actually put in every step they</p> <p>24 do. And for any changes, then we, you know, show</p>	<p style="text-align: right;">Page 49</p> <p>1 the heavy liquid spin time on the centrifuge, the</p> <p>2 name -- name and -- on what products we're using</p> <p>3 so they can buy the same products, the same</p> <p>4 centrifuge, if they'd like, et cetera, et cetera.</p> <p>5 So it's not inhibiting, in my opinion,</p> <p>6 any other experts from trying to do this work.</p> <p>7 And it must -- it must be okay, because</p> <p>8 Alan Seagrave has duplicated this method for</p> <p>9 using right out -- protocols right out of our</p> <p>10 paper, right out of our reports.</p> <p>11 Now, he didn't find chrysotile, and --</p> <p>12 but he never complained that there wasn't enough</p> <p>13 information for him to do this work, and that's</p> <p>14 a -- you know, that's a defense expert that</p> <p>15 actually did the CSM method.</p> <p>16 Q And I apologize. I'm not familiar with</p> <p>17 that. How -- how recently was that?</p> <p>18 A I have a report of his floating around,</p> <p>19 a couple of them. I don't know if I can put my</p> <p>20 hands on them or not. But if my client asks me,</p> <p>21 I will certainly look for it.</p> <p>22 Q And in looking at those reports where</p> <p>23 he didn't find chrysotile, what is your response</p> <p>24 to his conclusions?</p>

<p style="text-align: right;">Page 50</p> <p>1 A My response is, one, he didn't have the 2 right optical microscope. Two, he didn't bother 3 running any standards to show him what this 4 material looks like and how small it is, the 5 chrysotile. I think that is cata- -- that you 6 have to -- you have to look at something that is 7 similar to what you're trying to find because 8 it's so different than your usual asbestos-added 9 products, chrysotile products.</p> <p>10 Q And am I correct that your hypothesis 11 on why it's smaller is because of the milling? 12 MS. O'DELL:</p> <p>13 Object to the form.</p> <p>14 A That may be it. Certainly the Calidria 15 SG-210 has to be from milling. But that 16 certainly could be it.</p> <p>17 MR. EWALD:</p> <p>18 Q Well, are you also offering the 19 possibility -- 20 Withdrawn.</p> <p>21 Do you also hold up in the possibility 22 that the types of chrys- -- that the chrysotile 23 you are identifying in cosmetic talc is the 24 result of specific geographic -- geologic process</p>	<p style="text-align: right;">Page 52</p> <p>1 therefore, you want to use a double -- you want 2 to use a method to concentrate the needles to 3 make them visible so you can find it.</p> <p>4 Also, we, of course, have the document 5 showing that, one -- I think it was from the 6 Argonaut mine, where Johnson & Johnson was trying 7 to develop a flotation or surfactant used in 8 their -- in their -- in their beneficiation 9 process where they float it up so that they could 10 remove chrysotile. And they did -- they actually 11 ran standards of it where they would put some 12 chrysotile in, have a standard, et cetera.</p> <p>13 And I think it was the Hammondsville 14 mine where they actually were developing -- they 15 said they were developing a -- a -- almost like 16 put it on sup- -- you know, I'll use a Trump 17 statement, you know -- warp speed to develop a 18 beneficiation method to remove the tremolite.</p> <p>19 Now, if there was no asbestos tremolite 20 in any of these mines in Vermont, why is 21 Johnson & Johnson spending so much money to 22 figure out how to get rid of it? 23 But geologic- -- the geological 24 development of asbestos in -- in these mines is</p>
<p style="text-align: right;">Page 51</p> <p>1 in those areas?</p> <p>2 A That's out of my area. But if you look 3 at things like, for example -- 4 You know, I'll just give an example of 5 this. If you look at the Vermont mines, the 6 Vermont mines -- 7 And that's probably what we'll do next 8 at some point is go through the Vermont mines, 9 because, you know, that's where the genesis of 10 all this started about analyzing chrysotile. 11 There had to be a pretty good reason that 12 Johnson & Johnson hired a well-known, prestigious 13 university or institute, the Colorado School of 14 Mines Institute, to spend a whole year developing 15 the method on and using Vermont talc to 16 determine -- they called it the double density 17 method.</p> <p>18 Now, they -- once they -- once they had 19 the full method, it was signed off by the 20 director of the Colorado School of Mines, it was 21 signed off by their chief scientist, they had in 22 there a statement that I have made many times, 23 which is finding asbestos in talc samples is like 24 looking for needles in a haystack. And,</p>	<p style="text-align: right;">Page 53</p> <p>1 not my area. My area is -- I don't really listen 2 to that, because I'd rather just do the testing. 3 And certainly when you've got a lot of 4 documentation that says it's -- they're trying to 5 get rid of the -- the disagreeable minerals or 6 something like that.</p> <p>7 You know, it's 12:30. I think we've 8 been going for like an hour and 15 -- 9 MS. O'DELL:</p> <p>10 Ten minutes?</p> <p>11 THE WITNESS:</p> <p>12 Yeah. And I don't know. You guys are 13 all East Coast time; right?</p> <p>14 MR. EWALD:</p> <p>15 Q I am.</p> <p>16 A You know, at some point, not this 17 point, but, you know, I want to take 20 minutes 18 or 30 minutes for lunch or something.</p> <p>19 Q I'm happy to take a break. I'm happy 20 to take as long -- whenever you want to take 21 lunch. It's up to everybody else, including the 22 court reporter.</p> <p>23 A I don't want to dictate when we're 24 gonna take lunch. I usually like to get the</p>

<p style="text-align: right;">Page 54</p> <p>1 feedback from the court reporter. That's the 2 most important person. 3 MS. O'DELL: 4 So let's go off the record. 5 THE WITNESS: 6 Okay. 7 VIDEOGRAPHER: 8 Going off record. The time is 12:31. 9 (OFF THE RECORD.) 10 VIDEOGRAPHER: 11 Back on record. The time is 12:41 p.m. 12 MR. EWALD: 13 Q Hey, Dr. Longo, have you issued any 14 invoices for your MDL work -- 15 Yeah. I'll start there. 16 Have you issued any invoices to 17 plaintiffs for your MDL work? 18 A I know I issued a retainer, and I think 19 there were some others. And been some refunds, 20 sort of. 21 Q All right. I'll have some more 22 questions about that. 23 MR. EWALD: 24 But first, I could have missed it,</p>	<p style="text-align: right;">Page 56</p> <p>1 (DEPOSITION EXHIBIT NUMBER 7 2 WAS MARKED FOR IDENTIFICATION.) 3 MR. EWALD: 4 Q Dr. Longo, do you have any papers, any 5 papers in process related to talc? 6 A I've not had any publications -- any 7 papers either accepted or rejected by any 8 journals. 9 Q Okay. Are you currently working on any 10 papers related to talc? 11 A And I apologize. I don't talk about 12 that. I went through the experience once of -- 13 I'm not accusing you guys. I'm just 14 extra cautious now. 15 A law firm hired some experts that knew 16 the editor to try to -- 17 Because the paper got accepted, but it 18 had not been published yet. 19 -- to reject the paper. Fortunately, 20 the editor didn't do that. So now I just -- 21 You obviously have a right to know if 22 I've had one accepted or rejected, and that 23 hasn't happened, anything to do with talc. 24 Q All right. The -- let me mark as</p>
<p style="text-align: right;">Page 55</p> <p>1 Michelle. Have those been produced? Leigh. 2 Sorry. Not Michelle. 3 MS. O'DELL: 4 I'm always happy to be mistaken for 5 Michelle. That's a compliment. 6 Yes, there were invoices produced in 7 the Dropbox. 8 MR. EWALD: 9 Q Well, then, we will get back to that 10 one. 11 On the CV, let me show you, Doctor, 12 what -- the last version I have. And again, 13 maybe I missed something that was uploaded. Is 14 there a way for me to determine whether this is 15 your current CV? 16 A You know, I have not updated it in a 17 while, so 03- -- 03-12-2020 is the -- the latest. 18 Q Okay. 19 A Has been the updated CV since almost 20 about -- going on over four years. I'd better 21 write something to put in it. 22 Q All right. So we'll mark as Exhibit 7 23 CV with the date, as Dr. Longo indicated, at the 24 bottom, updated March 12th, 2020.</p>	<p style="text-align: right;">Page 57</p> <p>1 Exhibit 8 what I have. It's a Johnson & Johnson 2 reliance and review documents, Appendix A. 3 (DEPOSITION EXHIBIT NUMBER 8 4 WAS MARKED FOR IDENTIFICATION.) 5 MR. EWALD: 6 Q And what I show on that one is a date 7 at the bottom of April 23rd, 2021. Is that the 8 current one? 9 A It is. 10 Q All right. Then let's mark as exhibit 11 for -- 12 Well, let me ask you, Doctor, I -- 13 Hold one second. I'm downloading 14 something that was put into the chat by Leigh. 15 All right. Let's mark as Exhibit 9 the 16 forth supplemental MDL report by MAS dated April 17 29th, 2024. 18 (DEPOSITION EXHIBIT NUMBER 9 19 WAS MARKED FOR IDENTIFICATION.) 20 MR. EWALD: 21 Q And, then, Exhibit 10 will be the 22 supplement expert report that we received today 23 dated May 2nd, 2024, MDL Johnson's Baby Powder 24 Application Exposure Container Calculations for</p>

<p style="text-align: right;">Page 58</p> <p>1 Six Ovarian Cancer Victim Bellwether Cases. 2 (DEPOSITION EXHIBIT NUMBER 10 3 WAS MARKED FOR IDENTIFICATION.) 4 MR. EWALD: 5 Q Now, Doctor, I'm gonna spend some time 6 talking about what we marked as Exhibit 9, your 7 report, supplemental MDL report. So can you get 8 that in front of you, please? 9 A Is that this -- 10 Yes. I have it in front of me. 11 Q Great. 12 And I'm also gonna just mark for 13 reference the MAS second supplemental report that 14 is dated February 1st, 2019. 15 (DEPOSITION EXHIBIT NUMBER 11 16 WAS MARKED FOR IDENTIFICATION.) 17 MR. EWALD: 18 Q And, Doctor, you made reference at the 19 beginning of the deposition about Judge Wolfson's 20 order. Are you intending to rely on the PLM 21 analyses that are contained in your February 1st, 22 2019, report? 23 A I would guess that's up to the current 24 judge to decide, because, as I understand it,</p>	<p style="text-align: right;">Page 60</p> <p>1 straightforward. 2 And we were using a heavy liquid 3 density separation that was published for 4 specifically amphiboles in cosmetic talc. That 5 was published by Dr. Alice Blount in 1991. 6 Also, the New York -- the State of New 7 York Environmental Laboratory, ELAP, proficiency 8 testing program, has a PLM method using heavy 9 liquid density separation for finding tremolite, 10 and -- and it's PLM. And those folks, they have 11 to put standards together and be inspected, 12 et cetera. 13 So the PLM method for amphiboles was 14 really something that was never at issue. It was 15 the TEM -- you know, it was -- really, for the -- 16 for the hearing, it was all about asbestiform and 17 the TEM analysis. We really didn't get a chance 18 to talk much on redirect about the PLM analysis. 19 So -- so it's been published. It was all Blount. 20 And, you know, the only difference 21 between what our lab found and what Lee Poye's 22 lab found, you know, to me, that's just -- to me, 23 that's -- that's not a big deal. Certainly not 24 rely on the -- on the non- -- the non-heavy</p>
<p style="text-align: right;">Page 59</p> <p>1 that there's new science on that. And that was 2 all about the amphiboles. And, you know, we -- I 3 think that pushed the science along on the 4 chrysotile. So I think there's additional 5 science on this type of work. And that's about 6 all I can say about that. 7 Q And -- and I'm not asking you, 8 obviously, to take the lawyer, you know, 9 perspective or determining what the judge will 10 do, but do you -- is it your opinion that the 11 work you've done with PLM and chrysotile impacts 12 the reliability of the PLM amphibole testing 13 contained in your February 1st, 2019, report? 14 A I don't think it impacts it at all. 15 No. I've got, you know, Dr. Sanchez, who's a 16 critic of the chrysotile, testified, I think, 17 in -- I forget which court it was -- that he was 18 in agreement with the PLM analysis of the 19 amphiboles in the MDL samples. 20 So it's -- you know, it's an 21 interesting dilemma when a standardized technique 22 where there was really no criticism from any -- 23 any experts about the PLM analysis for 24 amphiboles, that's fairly -- you know, that was</p>	<p style="text-align: right;">Page 61</p> <p>1 liquid density separation or et cetera. But to 2 me, it was -- it was not really a controversial 3 thing. It was kind of surprising. So, you know, 4 that's about all I can say about it. 5 But, you know, clearly, she -- you 6 know, she struck it, Dr. Wolfson. 7 MS. O'DELL: 8 Judge. Judge Wolfson. 9 THE WITNESS: 10 What did I say? 11 MS. O'DELL: 12 Doctor. 13 THE WITNESS: 14 Jesus. 15 MS. O'DELL: 16 Judge. 17 THE WITNESS: 18 All right. I've got to quit for today. 19 Just kidding. 20 MR. EWALD: 21 Q When you say that the PLM without heavy 22 liquid separation -- 23 Let me withdraw the question. 24 You've indicated, I believe, that the</p>

<p style="text-align: right;">Page 62</p> <p>1 differences between the results between your lab 2 on the PLM without Blount separation and 3 Mr. Poye's lab at the time, J3, was not a big 4 deal. What do you mean by that? 5 MS. O'DELL: 6 Object to the form. 7 A Well, we -- we -- we had, you know, 8 increased the resolution of our -- our Olympus 9 microscope where we fitted it with a -- an 10 infinity objective lens and then put it all on a 11 high-resolution monitor with a high-resolution 12 camera and spent a lot more time analyzing 13 samples than you normally do. 14 You know, and then I had a -- I had a 15 discussion with Lee about it, what he did versus 16 us, and then his next deposition he said he 17 didn't recall that. 18 But then he said, oh, well, it must 19 have been when he called me, how I was so excited 20 about objective lens, new objective lens. I 21 mean, that's not really what the conversation was 22 about. 23 But it's not unusual for our laboratory 24 to find trace amounts in samples by PLM less than</p>	<p style="text-align: right;">Page 64</p> <p>1 analyzed something like three- or four hundred 2 vermiculite samples. And three- or four hundred 3 vermiculite samples were positive for tremolite. 4 And from there we went to PLM -- and we 5 knew it was there -- to look at its fibrous 6 content. So we had dedicated -- you know, we 7 have PLM analysts that were shown that it is 8 there, and they could find it at .1 percent or 9 .01 percent. So it's just something we routinely 10 did in the property damage litigation. 11 Now, we -- we moved that XRD up to our 12 Raleigh lab after that, and then when we sold the 13 Raleigh lab, it went with it. But it was such 14 that we did not need to use heavy liquid density 15 separation to find it by PLM because it was about 16 a .1 or .01 percent. Probably higher, but that's 17 what we would usually find. 18 Q And what time frame are we talking 19 about when you're doing that analysis or MAS is 20 doing that analysis? 21 MS. O'DELL: 22 Would you mind repeating that, John? 23 You didn't come through clearly. 24 MR. EWALD:</p>
<p style="text-align: right;">Page 63</p> <p>1 .1 percent, because we were routinely doing that 2 and developed a method to make it a little more 3 sensitive back in the day when we were involved 4 in property damage cases that were W. R. Grace's 5 vermiculite. 6 So you have -- you have a method that 7 is an official State of New York ELAP method 8 that's published. You have a method in a 9 peer-reviewed paper by Dr. Alice Blount using -- 10 determining amphibole asbestos, tremolite, using 11 PLM and heavy liquid density separation, as well 12 as the ELAP program for New York. It's unclear 13 how it's not verified or unscientific. To me, 14 anyway. 15 Q The reference to your lab work with 16 vermiculite prior to working in talc litigation, 17 explain to me how that impacts your PLM work in 18 analyzing talc for the presence of asbestos? 19 A Because some of the vermiculite got 20 into the asbestos-added product, such as 21 W.R. Grace fiber, being MONOKOTE 3, or 22 U.S. Gypsum's Firecode V, type D, which both 23 contain Libby, Montana, vermiculite. And at that 24 point, we used to have an XRD system, and we</p>	<p style="text-align: right;">Page 65</p> <p>1 Sure. 2 Q What period of time was MAS doing the 3 vermiculite analysis that you were just referring 4 to, Doctor? 5 A Approximately 1991 to about 1995 or so. 6 Q And is -- is it your position, Doctor, 7 that that PLM work with vermiculite made it more 8 likely that your PLM analysis -- analyst would 9 detect asbestos at trace levels in cosmetic talc 10 samples? 11 MS. O'DELL: 12 Object to the form. 13 A No. I mean, you -- you would have to 14 have -- you would have to have -- you would -- 15 Strike all that. 16 In my opinion, you have to have some 17 kind of standard to show you what it's looking 18 like so that you can understand that you're 19 dealing with things that are 10 microns in 20 length. 21 I think the average size we got with 22 SG-210 -- 23 Now, I'm looking at the supplement 24 expert report, October 9, 2023, where we went</p>

<p style="text-align: right;">Page 66</p> <p>1 through this exercise.</p> <p>2 Where is it? I know it's in here.</p> <p>3 Chrysotile intergrowth standard. Bundle size,</p> <p>4 section 6. Here it is.</p> <p>5 The Calidria have the average length of</p> <p>6 8 microns and an average width of 1 micron.</p> <p>7 And if you go over here to Gold Bond,</p> <p>8 the average length of the chrysotile in the Gold</p> <p>9 Bond, which is Montana talc, was 9 microns, and</p> <p>10 the average width is 1.4 microns.</p> <p>11 MS. O'DELL:</p> <p>12 Dr. Longo, would you identify what</p> <p>13 pages you read from, for the record?</p> <p>14 A So I'm reading from pages -- page 4,</p> <p>15 .1 percent SG-210 spiked bentonite clay.</p> <p>16 And then I'm reading from page 5, which</p> <p>17 was analysis of Gold Bond, and it was eight</p> <p>18 samples.</p> <p>19 So, in my opinion, in order for you to</p> <p>20 know what to look for, you have to see something</p> <p>21 that's representative, that you know it's there.</p> <p>22 So you -- you take a chrysotile product that is</p> <p>23 in the similar size range, and you start looking</p> <p>24 at that first, just without anything so you can</p>	<p style="text-align: right;">Page 68</p> <p>1 because there was somewhat of a dispute that the</p> <p>2 structures in the Calidria RG-144 was gonna be</p> <p>3 less than -- the overall average would be less</p> <p>4 than 5 microns. And that turned out to be not</p> <p>5 true.</p> <p>6 But we also did an average, and I think</p> <p>7 the average was around 70 to 80. But we had very</p> <p>8 small stuff, too. So we were unable to work with</p> <p>9 that.</p> <p>10 But the SG-210 chrysotile really was a</p> <p>11 much better fit for what we were finding in the</p> <p>12 PLM.</p> <p>13 Q And that analysis, we are talking about</p> <p>14 the SG-210 as being a better fit, that was in</p> <p>15 September of 2022?</p> <p>16 A Yes. That's the one.</p> <p>17 Q Why did you spike Calidria .1 percent</p> <p>18 in bentonite and not talc?</p> <p>19 A Because I wanted it to be pure</p> <p>20 chrysotile. I didn't want anything interfering</p> <p>21 with it, such as, oh, you're -- that's probably</p> <p>22 talc that you're looking at. And bentonite clay</p> <p>23 doesn't have any talc in it. And, according to</p> <p>24 Mickey Gunther, Calidria doesn't have any talc in</p>
<p style="text-align: right;">Page 67</p> <p>1 get used to what the refractive indices are, as</p> <p>2 well as its size.</p> <p>3 MR. EWALD:</p> <p>4 Q So is it your testimony, Doctor, that</p> <p>5 before 2020, your PLM analyst had never come</p> <p>6 across Calidria?</p> <p>7 A I'm sorry. I didn't catch the</p> <p>8 question.</p> <p>9 Q Is it your testimony, Doctor, that</p> <p>10 before 2020, your PLM analyst had never analyzed</p> <p>11 Calidria?</p> <p>12 A No. We've analyzed Calidria in the</p> <p>13 past, because we've worked on that. But it was</p> <p>14 usually all RG-144, which we had five pounds of,</p> <p>15 and we did, you know, air samples.</p> <p>16 Now, if you go and look at what the</p> <p>17 average size is for RG-144, you get very small</p> <p>18 stuff, but you also get very large stuff.</p> <p>19 And I was just looking around for --</p> <p>20 Anyway, I'll find it.</p> <p>21 Q Okay.</p> <p>22 A We had done -- we had done just typical</p> <p>23 work of looking at what the average -- what the</p> <p>24 average size was for RG-144 for the bundles</p>	<p style="text-align: right;">Page 69</p> <p>1 it.</p> <p>2 So I wanted it to be something that,</p> <p>3 yes, this is definitely chrysotile, and it's a</p> <p>4 1.550, and this is -- and we're getting the same</p> <p>5 refractive indices in 1.550 that we were seeing</p> <p>6 for the chrysotile in the cosmetic talc.</p> <p>7 So it was eliminating all the potential</p> <p>8 confounding materials that could have been in</p> <p>9 there, like, oh, you're just looking at another</p> <p>10 talc fiber, as I say.</p> <p>11 Q As a new spike .01 percent of Calidria</p> <p>12 in bentonite?</p> <p>13 A I believe so.</p> <p>14 MS. O'DELL:</p> <p>15 Do you need to get that report?</p> <p>16 THE WITNESS:</p> <p>17 I've got it right here.</p> <p>18 MS. O'DELL:</p> <p>19 Okay. Good.</p> <p>20 A Yeah. On page 4, table 1, we have</p> <p>21 samples CSM .1 percent B, and B stands for</p> <p>22 bentonite clay.</p> <p>23 MR. EWALD:</p> <p>24 Q Let's make sure that you're now</p>

<p style="text-align: right;">Page 70</p> <p>1 referring to your October 9th, 2023, report. Is</p> <p>2 that right?</p> <p>3 A Yes.</p> <p>4 Q All right.</p> <p>5 A I think I have the same data in the --</p> <p>6 in the other one, too.</p> <p>7 Q And which page are you on, sir?</p> <p>8 A I'm on page 4.</p> <p>9 Q All right. On table 1, I see on page 4</p> <p>10 is .1 SG-210 spiked bentonite; right?</p> <p>11 A Correct.</p> <p>12 Q And, then, my question -- I'm sorry if</p> <p>13 I'm misunderstanding -- did you spike .01 percent</p> <p>14 or lower of Calidria in talc?</p> <p>15 A Well, we have an analysis where we</p> <p>16 spiked what we talked about, where --</p> <p>17 Let's see. I've already lost that</p> <p>18 document.</p> <p>19 -- where I said, oh, that's -- that is</p> <p>20 an error, the 2022 one.</p> <p>21 Q Okay. And in looking at it, Doctor,</p> <p>22 I -- I mistakenly asked that last question. So</p> <p>23 I'm not trying to cut you off on whatever you</p> <p>24 want to tell me, but it wasn't my intent to ask.</p>	<p style="text-align: right;">Page 72</p> <p>1 Because chrysotile is only -- the only</p> <p>2 thing in there at 1.550 are we gonna see the same</p> <p>3 types of refractive indices we've been seeing in</p> <p>4 the cosmetic talcs.</p> <p>5 Q Fair to say, Doctor, that the</p> <p>6 percentage chrysotile by weight that you are</p> <p>7 finding with your PLM chrysotile method is levels</p> <p>8 of order of magnitude lower than .1 percent?</p> <p>9 A It is. But I guess I'm not explaining</p> <p>10 myself very well.</p> <p>11 Q Okay.</p> <p>12 A It was not a study of how low or what</p> <p>13 is our best detection limit for chrysotile in</p> <p>14 cosmetic talc. This was all about the what are</p> <p>15 the refractive indices for a chrysotile product</p> <p>16 that would be in there without any fibrous talc,</p> <p>17 without any platy talc, without any chrysotile</p> <p>18 coming from the talc itself, and see how that</p> <p>19 compares to what we're seeing in the cosmetic</p> <p>20 talc. That was what this study is.</p> <p>21 What you're asking about is what we're</p> <p>22 in the process of doing now, where we have all</p> <p>23 the way down to -- I think it is three zeros and</p> <p>24 a one and maybe even further than that where we</p>
<p style="text-align: right;">Page 71</p> <p>1 So --</p> <p>2 A Okay.</p> <p>3 Q We can -- we can get back to 2022. We</p> <p>4 probably will.</p> <p>5 But my question I intended to ask was</p> <p>6 whether you had -- if MAS has spiked bentonite</p> <p>7 with levels of Calidria below .1 percent.</p> <p>8 A No. I don't believe so. I think that</p> <p>9 was the only one we put together.</p> <p>10 Q And why not?</p> <p>11 A I want to say "what for?" We have</p> <p>12 spiked talc with lower levels, and we also</p> <p>13 have -- you know, just generated a new set of</p> <p>14 Calidria SG-210 in talc going all the way down to</p> <p>15 .000 -- maybe four zeros and a one that we'll be</p> <p>16 working on to have a new standard for the -- for</p> <p>17 that. But there's really no reason to. I just</p> <p>18 was looking for something where you would easily</p> <p>19 find the chrysotile, .1 percent, and you're in a</p> <p>20 matrix that does not have any confounding</p> <p>21 minerals in it, such as chrysotile, from the</p> <p>22 standard or -- and/or talc plates and/or --</p> <p>23 This was to look at and go this will be</p> <p>24 a clear indication that this --</p>	<p style="text-align: right;">Page 73</p> <p>1 have the standard made up, and we will be</p> <p>2 analyzing those a little bit more robust than</p> <p>3 last time -- some pictures of it, et cetera -- so</p> <p>4 that we know what our detection limit is on the</p> <p>5 PLM, the standard.</p> <p>6 Q And that standard -- sorry -- that</p> <p>7 you're referring to that's in the process, that</p> <p>8 is a talc -- is it a J&J talc sample?</p> <p>9 A Number 13.</p> <p>10 Q Okay. And you're talking about spiking</p> <p>11 that J&J talc sample with .0001 percent of</p> <p>12 SG-210?</p> <p>13 A Correct. All the way down to 0.0001.</p> <p>14 And we have done the same thing with TEM, but</p> <p>15 we've already got that data with the SG-210 to</p> <p>16 see what our bottom line detection limit is.</p> <p>17 Q When you say the same thing with TEM,</p> <p>18 you're referring to the amphibole heavy liquid</p> <p>19 separation method?</p> <p>20 A Well, no. This -- the chrysotile</p> <p>21 method. But we're not -- I'm not satisfied that</p> <p>22 we have the most optimum method. So we're gonna</p> <p>23 have to redo it when we finally develop the most</p> <p>24 optimum method for extracting out the chrysotile</p>

<p style="text-align: right;">Page 74</p> <p>1 out of the cosmetic -- out of the talc plates and 2 fibrous talc. Getting close. 3 Q I'm sorry, Doctor. I'm confused. 4 The -- 5 You said earlier, you were talking 6 about you have done the level of detection 7 analysis for TEM. Did I hear that correctly? 8 A Using -- using SG-210. 9 Q And did that involve heavy liquid 10 separation? 11 A It did. But we're -- but we're -- have 12 a standard. We're using Calidria at concen- -- 13 at known concentrations so that we can have an 14 idea of what our percentage of recovery is. And 15 I'm not sure we have the exact right recipe for 16 the most -- the most efficient way to extract the 17 chrysotile out of the talc. 18 Q Is -- 19 What you're talking about is something 20 that's a work in progress that has not been 21 published; right? 22 MS. O'DELL: 23 I'm sorry, John. You didn't come 24 through clear. What did you say?</p>	<p style="text-align: right;">Page 76</p> <p>1 If you think about it, especially for 2 amphiboles, you have something that is 200 3 microns long, you can easily see that in PLM, but 4 that's gonna look like a log under TEM. It 5 would -- it would transverse the entire grid. 6 There's all -- been all kinds of 7 theories about why it is different, that it's too 8 big, you know, falls off, et cetera. So it's not 9 unusual to get different results. 10 Q I understand, Doctor. And I understand 11 the -- once it gets under the microscope, the 12 differences of what can be resolved. 13 My question is you're talking about the 14 recovery efficiency of the heavy liquid method. 15 Is that something that would differ when you also 16 put it under a microscope that is PLM or TEM? 17 A Well, it would affect both. Because 18 you want the most sensitive method you can have 19 on the detection limits. You know, it's not 20 gonna affect that you're not gonna see anything, 21 I don't think. I mean, we just don't know yet. 22 But I would like to start with going, okay, this 23 is the most efficient method to extract out the 24 chrysotile.</p>
<p style="text-align: right;">Page 75</p> <p>1 MR. EWALD: 2 Q Am I correct that what you are talking 3 about, Dr. Longo, has not been disclosed in 4 litigation yet; right? 5 A That's correct. 6 Q And is there any difference in your 7 mind on how the heavy liquid density separation 8 effectiveness would work in PLM as opposed to 9 TEM? 10 A Well, TEM, you're gonna be able to see 11 single fibers. PLM, you cannot. So you're 12 looking at two different populations of asbestos 13 structures. The only thing PLM can see is 14 bundles, and the bundles have to be about 15 anywhere from four-tenths to at least up to one 16 or two microns wide. Half a micron wide is 17 probably the smallest you can see. If you're 18 dealing with chrysotile, especially Calidria, the 19 average size of those are about .02 to .03. So 20 you -- you've got two different populations. 21 It's -- it has been -- it has been 22 known in the field -- in the scientific field 23 that your PLM results are never consistent with 24 your TEM results, because you're looking at --</p>	<p style="text-align: right;">Page 77</p> <p>1 Q Is it your testimony that, sitting here 2 today, MAS is not using the most efficient method 3 to extract the chrysotile? 4 MS. O'DELL: 5 Objection. Objection to form. 6 A MAS doesn't know that. We're using a 7 pretty efficient system right now that I think 8 we're getting -- you know, we're about there. 9 You know, I've always thought we were using the 10 most efficient system. But I want the -- I want 11 to know for a fact. And then, you know, we go on 12 to, you know, the TEM, too. 13 MR. EWALD: 14 Q And what is your current under- -- what 15 is your understanding of MAS's current efficiency 16 method for extracting chrysotile from talc? 17 A I can't -- I'm not gonna -- I can't 18 really say what our efficiency is, is it 90 19 percent, is it 80 percent. We still have a 20 little bit more work to do on it. 21 Q Okay. So, as you sit here today, you 22 can't testify as to what the average efficiency 23 of MAS's chrysotile extraction method is? 24 MS. O'DELL:</p>

<p style="text-align: right;">Page 78</p> <p>1 Object to the form. Asked and 2 answered. 3 A Again, it could be as high as 80 to 90 4 percent right now. They would have to be -- go 5 back over the data again. 6 Q What's the lower range? 7 A Oh, the lower range goes way back when 8 when we were using, like, 2.72. And that was 9 when we were trying to figure out why it was 10 showing up in the pellet. I mean, we were still 11 seeing it. It's not -- it's not that we're not 12 identifying it in PLM. We were finding it and 13 verifying it and had the right refractive 14 indices, et cetera, et cetera. You just want to 15 have the most efficient method if you're going to 16 be quantifying it to some degree. And you also 17 want, in TEM, you want to be able to say we have 18 the method that gives us the highest sensitivity. 19 But it wasn't going to affect our ability to 20 identify it by PLM. 21 Q That was a little unclear, Doctor. And 22 I apologize. I'm sure it's my fault. Are -- 23 have you started -- has MAS started analyzing 24 cosmetic talc for the presence of chrysotile</p>	<p style="text-align: right;">Page 80</p> <p>1 number of test results. Correct? 2 A Correct. 3 Q And, specifically, we have 43 analysis 4 results by MAS for talc containers; correct? 5 MS. O'DELL: 6 Would you mind repeating that, please, 7 John? 8 MR. EWALD: 9 Sure. 10 Q If I'm looking at what was marked as 11 Exhibit 9 -- 12 Maybe an easier way to do it is this. 13 I'm looking at what was marked as Exhibit 9. If 14 I go to the last two pages, Doctor, I see eleven 15 test results for analysis of Chinese retains; 16 right? 17 A Correct. 18 Q And then, preceding that, there's a 19 list of 43 analysis results of J&J talc products. 20 Correct? 21 A Correct. All sourced from Chinese -- 22 China, starting off with the 2004 -- 23 I think the highest ones we have in 24 here is 2019 and 2018, which, of course, the 2018</p>
<p style="text-align: right;">Page 79</p> <p>1 using TEM? 2 A We have not started analyzing any 3 cosmetic talc Johnson Baby Powder samples using 4 TEM. 5 Q Is MAS analyzing any cosmetic talc 6 samples by TEM for the presence of chrysotile? 7 A I'm not saying we have, and I'm not 8 saying we haven't. But that work right now is 9 confidential. 10 Q All right. So, Doctor, we have the 11 test results that are reported in your February 12 1st, 2019, report that addressed the amphibole 13 analysis and the PLM -- 14 Well, withdrawn. 15 We have the results, test results, of 16 MAS's analysis through PLM and TEM of J&J samples 17 for the presence of amphiboles in the February 18 1st, 2019, report; right? 19 A Correct. 20 Q All right. So I want to leave that 21 aside for the moment. And when we're looking at 22 Exhibit 9, the fourth supplemental report, there 23 is a set of tables at the end of the report that 24 list a number of samples. I'm sorry. List a</p>	<p style="text-align: right;">Page 81</p> <p>1 ones finding chrysotile -- 2 I think they were 2018. 3 -- would be consistent with the FDA's 4 analysis of off-the-shelf Johnson Baby Powder 5 from Guangxi that AMA found. Out of the bottle, 6 there was three splits, and two of them were 7 positive for chrysotile. 8 So they weren't using heavy liquid 9 density separation, but they certainly were 10 verifying that there is chrysotile in Guangxi, 11 Guangxi mine. That's not the Guangxi mine. 12 That's -- that is the province. There are about 13 four mines there that have been used over time. 14 Q All right, Doctor. I just want to make 15 sure the record's clear. This list also 16 contains, on the previous page, three Vermont 17 samples; correct? 18 A Oh, yeah. I forgot about that. I 19 missed it when I was going through. Yeah, three 20 Vermont samples that we found chrysotile, I 21 think. Oh, there they are. Samples 1, 2, 3, the 22 Weirick, Zimmerman, and Colley. 23 Q All right. And, so, that actually, 24 when you add up the chrysotile -- I'm sorry --</p>

<p style="text-align: right;">Page 82</p> <p>1 the China with the Vermont bottles listed here in 2 your report, you get 46 bottles that have been 3 analyzed that are included in this report; 4 correct? 5 A Correct. 6 Q And combining the test results that are 7 included within your February 1st, 2019, report 8 and what we just looked at in your fourth 9 supplemental MDL report, are those the MAS 10 testing that you are going to be relying on for 11 your opinions in the MDL cases? 12 A Well, I would be relying on them 13 showing the advancement in science on PLM 14 analysis that was not there four years ago. 15 For the amphibole analysis, we have 16 very -- yeah. We -- most all those PLM samples 17 have TEM samples along with it that show that 18 it's positive. 19 And, plus, we, of course -- you know, 20 if you're looking at Daubert, I guess, for the 21 amphibole asbestos, it's been published in the 22 peer-reviewed literature by a scientist that was 23 consulting for Johnson & Johnson who published a 24 paper showing that there was asbestos, amphibole</p>	<p style="text-align: right;">Page 84</p> <p>1 published it. But, in my opinion -- 2 And it's -- I mean, it's not -- it's 3 almost facts instead of opinion. You know, the 4 documents that were released by Johnson & Johnson 5 I believe proves definitely that this was a 6 method that they did not want to have out there, 7 going all the way from -- 8 Is this where I have it? No. It's the 9 other one. 10 Excuse me for fumbling around here. 11 Q That's okay. 12 A So if you go to the April 29th 13 report -- 14 And where are we here on this? I 15 thought I had it in here. 16 Oh, here we go. 17 If you go to the discussion/conclusion 18 section on page 3 of the April 29th, 2024, 19 report, it goes into development of this -- of 20 this procedure starting on page 3, you know, 21 Colorado School of Mines with HLS sample 22 preparation. 23 And, then, as we move along on what 24 they did, on December 27th, 1973 --</p>
<p style="text-align: right;">Page 83</p> <p>1 asbestos, and talked about heavy liquid density 2 separation and so many top plates, et cetera, 3 et cetera, plus that. 4 And, again, the CSM method, not a Longo 5 method -- this is the Colorado School of Mines 6 method, and they showed positive results. But 7 the analysis is a lot the same, because they're 8 basing their chrysotile identification on the 9 refractive indices of the product. They're doing 10 PLM on it and they're doing -- they're developing 11 refractive indices for the analysis. 12 So, no. Has it been published in the 13 peer-reviewed literature? In my opinion, it 14 probably would have if it wasn't deep-sixed, in 15 my opinion, by Johnson & Johnson. 16 Q Do you have any basis -- 17 Well, are you willing to testify, to a 18 reasonable degree of scientific certainty, that 19 the Colorado School of Mines' PLM chrysotile 20 heavy density liquid separation analysis was not 21 published because of actions taken by 22 Johnson & Johnson? 23 A You know, you have a good point. I 24 don't know if Johnson & Johnson would have</p>	<p style="text-align: right;">Page 85</p> <p>1 Okay. I'm gonna read here this. 2 "Colorado School of Mines prepared the following 3 report for Johnson & Johnson. A procedure to 4 examine talc for the presence of chrysotile, 5 tremolite-actinolite fibers for project C10704," 6 and then it goes on to say "this CSM report 7 provides the methodology using double-density 8 heavy liquid separation for chrysotile and 9 amphibole asbestos. It reports detection limit 10 of 10 ppm" -- and they've got it at .0001 11 percent -- "and verification of asbestos type 12 after separation." 13 And, as I talked about earlier, if you 14 go to page 6, they used -- they use a sentence 15 here that I've used in court and before. "The 16 impurity level becomes very low, a double less 17 than 1 percent. It is necessary to examine 18 amounts of sample -- examine amounts of sample in 19 order to detect the impurity. As a result, the 20 requirement to detect the proverbial needle in 21 the haystack, we have involved a procedure which 22 preconcentrates the impurities prior to 23 examination. The net effect is that a large 24 initial sample is fractionated in order to reject</p>

<p style="text-align: right;">Page 86</p> <p>1 the majority of further examination." 2 Now, if we go down, here's Johns 3 Manville asking this about it. "Another 4 indication of how confident the CSM was in their 5 double density separation method is that they 6 informed Johns Manville they thought this heavy 7 liquid separation method they developed was good 8 enough to be considered for a patent." 9 And I won't go through all of this. 10 But here's why I think, in my opinion, that they 11 pretty much shelved this method. And this comes 12 from a... 13 Okay. If we go to the next page, I 14 mean, here is we have "Johns Manville is 15 interested in this material." 16 If you go down under October 29th, 17 1973, letter, "specifically, we are interested in 18 your advanced technology used to separate felted 19 masses of asbestos by heavy liquid separation 20 proprietary [sic] to stain -- before staining 21 chrysotile by iodine as worked out by Morton 22 Baker of Johns Manville." He goes on. He says 23 "I understand your position completely on 24 specific techniques being worked for other</p>	<p style="text-align: right;">Page 88</p> <p>1 court that needle-in-the-haystack reference 2 before; right? 3 A Well, yes. I used it as an example 4 to -- to -- to help the jury understand what 5 heavy liquid density separation is. 6 Q Right. And, for example, you used 7 that -- 8 Sorry. 9 A When I couldn't -- 10 Q And, for example, you used that in the 11 England trial with Mark Lanier; correct? 12 A Yes, sir. And this was before I saw 13 these documents. 14 Q So when you were using the 15 needle-in-a-haystack example, your testimony is 16 you had never seen the Colorado School of Mines 17 document with it referring to needle in the 18 haystack? 19 A No. If I had -- if I had seen this 20 back in the Ingram, things would be different. I 21 would have started right off on trying to go 22 after the chrysotile. 23 Q So did you come up with needle in a 24 haystack or did Mr. Lanier come up with needle in</p>
<p style="text-align: right;">Page 87</p> <p>1 companies which are proprietary and, as you 2 indicated, will probably be patented." 3 So it must have been a pretty good 4 sample if they're thinking about patenting it. 5 Now, we go to page 7 and we look at -- 6 and I go in and say why I think it was never used 7 is that Dr. Nashed of J&J received this report on 8 May 23rd, 1973, in which it states "the 9 limitation of method is that it may be too 10 sensitive." 11 Then we have a February 18th, 1975, 12 memo to Dr. Rolle where he states "I have also 13 enclosed our test method for the proposed X-ray 14 technique which was drawn out by Boots L-e-d 15 [sic] in conjunction with Dr. Pooley." 16 The Yardley method is essentially 17 another heavy liquid density separation method. 18 In here he states "we deliberately have not 19 included a concentration method, as we felt it 20 would not be in the worldwide company interest to 21 do this." 22 Q All right, Doctor. So you said a lot 23 of stuff there, but you mentioned at the 24 beginning of that discussion that you'd used in</p>	<p style="text-align: right;">Page 89</p> <p>1 a haystack? 2 MS. O'DELL: 3 Object to the form. 4 A No. I was looking -- I think it was 5 me. I was looking for a way to easily explain to 6 a jury what heavy liquid density separation is. 7 Now, you have hay, which would have a 8 density much lower than needles or steel. Those 9 float. The needles go to the bottom. And you 10 can just -- you know, if you hold up your water 11 bottle and you go, now, if my needles are down 12 here and I can just top this off, I can open 13 this, out they come, while all the hay stays up 14 here. 15 MR. EWALD: 16 Q So -- 17 A If he came up with it, I told him. 18 Q Okay. 19 A I'm just kidding. 20 Q So we're coming up pretty close to an 21 hour, but I do want to finish some quick hits. 22 A You've probably got some questions 23 about this. 24 Q So before that last discussion, you</p>

<p style="text-align: right;">Page 90</p> <p>1 mentioned J&J consulting -- consultant publishing 2 peer-reviewed literature, something about the 3 concentration method. What are you referring to? 4 A Well, I -- I withdraw the "published." 5 What I'll not withdraw is they had a perfectly 6 good method -- I mean, they had positive 7 results -- that after 1974 was never mentioned 8 again. In the mid-'70s, they're hiring experts 9 like, you know, McCrone and others, to start 10 looking for asbestos. They never told them about 11 this heavy liquid density method that the 12 Colorado School of Mines developed, and they 13 never put it in their own protocol for J&J for 14 their TEM method, 70042 or 70024, one of those 15 numbers. You know, it was all your regular 16 dilution method, which gives you horrible 17 detection limits. 18 You know, the heavy liquid density 19 allowed us to get detection limits of anywhere 20 from, you know, 8- or 9,000 to 10,000, where all 21 the TEM methods out there have detection limits, 22 depending on how many grid openings they look at, 23 anywhere from 5 to 6 million up to 15 million 24 fiber bundles per gram to find one.</p>	<p style="text-align: right;">Page 92</p> <p>1 an advancement of science with respect to PLM 2 analysis over the last four years. What 3 advancements are you referring to over the last 4 four years that weren't there when Judge Wolfson 5 issued her opinion? 6 A One, the big advancement is finding 7 chrysotile. It's using better, little optical -- 8 PLM optical microscopes, a better resolution. In 9 fact, we haven't incorporated it yet, but Leica 10 came out, first over, a central-stop dispersion 11 objective lens, which is normally 10X is now 12 400X. But I'm in the process of validating it. 13 We -- we have -- we didn't have, you know -- 14 Judge Wolfson, we weren't doing 15 chrysotile at all. We were able to find 16 references of the standard PLM methods that have 17 come out that I wasn't aware of the ELAP, New 18 York, you know, environmental laboratory for 19 sufficiency testing for doing heavy liquid 20 density separation for amphiboles where they 21 called the heavy liquid anything higher than 2.76 22 or 2.7. 23 We had much -- you know, we had much 24 better equipment, and really, the -- the PLM</p>
<p style="text-align: right;">Page 91</p> <p>1 When FDA was struggling with their -- 2 they want to develop a heavy liquid density 3 separation and sending out notices and -- and, 4 you know, and all the documents I got about FDA 5 trying to do this in '74, '75 -- sorry -- '71, 6 '72, they didn't have any luck. They weren't 7 technically good enough to make their own heavy 8 liquid density, and they're putting it out there 9 for people to see. Johnson & Johnson's looking 10 at it and not saying a word. 11 Johnson & Johnson didn't -- did not 12 instruct the RJ Lee lab to use heavy liquid 13 density separation in their analysis to show 14 that, if there's amphibole asbestos in there or 15 not. You know, there's one reference to using 16 Blount's method for TEM, not for J&J, for some 17 other product. So RJ Lee certainly knew about 18 it. 19 So that's why I say they did not 20 provide that to any consultants. And, to me, it 21 feels like they were keeping this a secret 22 because it was too sensitive, like they state in 23 their memo. 24 Q You also mentioned that there have been</p>	<p style="text-align: right;">Page 93</p> <p>1 analysis that we were using, the protocols have 2 been around for years and years and years. 3 It's -- it shouldn't be a method that is 4 disputed. 5 Now, there is -- you know, people are 6 looking at that, so -- and, you know, to be fair, 7 Judge -- Judge Wolfson, we didn't really have a 8 chance to address much of anything in the hearing 9 for redirect. It was cut off. I think if we had 10 a chance to have 20, 30 minutes on redirect in 11 that hearing, we could have answered some of 12 those questions. 13 Q All right. We've been going about 14 another hour. 15 A Yeah. If we could take, like, a 16 20-minute, 30-minute lunch. 17 Q Okay. Let's go off the record first. 18 VIDEOGRAPHER: 19 Okay. Off record. The time is 20 1:39 p.m. 21 (OFF THE RECORD.) 22 VIDEOGRAPHER: 23 Back on record. The time is 2:19 p.m. 24 MR. EWALD:</p>

<p style="text-align: right;">Page 94</p> <p>1 Q Okay, Doctor. Back from lunch, and I 2 wanted to follow up on one of the things that I 3 asked before the break. And we talked about the 4 reports -- I'm sorry -- the analysis of bottles 5 that are identified in your fourth supplemental 6 MDL report. And am I correct that there have 7 been additional MAS PLM chrysotile tests of J&J 8 talc products after the reports listed in 9 Exhibit 9? 10 A Other than what we have here, I'm not 11 aware of any. 12 Q Well, for example, the Henderson or 13 Kirch? 14 MS. O'DELL: 15 I don't know what you're referring to. 16 MR. EWALD: 17 Q Do either of those names ring a bell, 18 Doctor, Henderson -- 19 A No. Because I don't remember issuing 20 any more reports. Now, I -- I don't recall 21 issuing any more. But if -- if one -- 22 Q And maybe it's something we can, you 23 know, take a look at on tomorrow. But the -- 24 A Yeah, if you have them and have an M</p>	<p style="text-align: right;">Page 96</p> <p>1 haven't -- we haven't updated the chart in a 2 while. 3 Q Okay. 4 A Which needs to be -- it needs to be 5 done. 6 Q From a procedure perspective, how the 7 CSM procedure that MAS is doing is conducted, has 8 it changed, to your knowledge, since the Newsome 9 report, which is the last one in the end of 2023? 10 A No. We have the density of 2.65. We 11 have the -- the refractive indice [sic] fluid is 12 1.560, and the amphibole PLM analysis is still 13 the same, you know, from the ISO 22262-2 method 14 where we're using 2.85 for the TEM. 15 And for the New York ELAP method, it 16 states that it has to be greater than 2.75 or 17 2.76, and we're using 2.78. And that hasn't 18 changed for a while. 19 Q Your -- 20 Do you remember being deposed in the 21 second-day session in the Clark, New Jersey, case 22 by my colleague, Kevin Hynes, last month? 23 A I remember that. 24 Q Has there been any developments in</p>
<p style="text-align: right;">Page 95</p> <p>1 number, I'll -- I'll check. 2 Q Okay. So, for the record, there's one 3 that appears to have been issued shortly after 4 the Newsome -- 5 Newsome analysis, I believe is the last 6 one, by M number, on your chart, and I have a 7 Janine Henderson that was MAS project number 8 M71730. 9 MS. O'DELL: 10 Would you mind giving us that number 11 again, please? 12 A I've got it. M71730. 13 MR. EWALD: 14 Q It was issued on, according to the 15 front page of the report, 11-28-2023. 16 And then I believe the only other one 17 that I'm aware of but I didn't see was one that 18 was issued in February of this year in the Kirch 19 case, Michelle Kirch, which is M number M714 -- 20 oh, sorry. M71740. 21 A Well, you've got the M numbers, 22 et cetera. I certainly wouldn't disagree with 23 that. I just had no recollection that we had 24 more work. But I will dig those up. Because we</p>	<p style="text-align: right;">Page 97</p> <p>1 MAS's PLM chrysotile method since the beginning 2 of last month, April of 2024? 3 A No. We're still doing the same thing 4 for PLM. 5 Q Okay. 6 A That doesn't mean, you know, in a week 7 or two, you know, we'd make another modification. 8 Q Right. And I guess it's a -- more a 9 legal question than a question for you on where 10 the disclosure times end on the MDL. So I don't 11 need to get into that. 12 What I want to talk about is, for lack 13 of better phrase, the origin story of MAS and the 14 PLM chrysotile work. So walk me through when MAS 15 first started working on trying to come up with 16 the PLM chrysotile method. 17 A It initially started February 4th, 18 about two -- about four or five weeks before 19 February 4th, 2020, where, when we first -- must 20 have been around that time I came across the 21 Colorado School of Mines. Because we initially 22 started using what they said they did, is use 23 iodine, which will bind to chrysotile and not to 24 talc.</p>

<p style="text-align: right;">Page 98</p> <p>1 Now, you know, maybe it wasn't really 2 clear it would bind to the polymorphs or not. 3 Then they would use that and take their samples 4 and then go look at PLM. 5 So we started doing that, and it worked 6 great with the NIST 1866b standard. I mean, it 7 would turn a brownish-blue, and you could pick it 8 right out of the black. 9 What we didn't count on initially is 10 the size of the structures. The -- the size of 11 the chrysotile being found in the talc was too 12 small to absorb any of this iodine at enough that 13 you could actually see it. 14 So there was a misconception initially 15 that we were using the iodine to identify 16 chrysotile. That was not really -- that was 17 never the reason. 18 Colorado School of Mines says this was 19 an easy way to see what you were looking for than 20 to grab and take it and go get PLM and verify 21 it's chrysotile. 22 So we had to stop that, and we had used 23 the -- we had used it on some standards, the 24 1866b standards, and I believe that the FDA</p>	<p style="text-align: right;">Page 100</p> <p>1 point where they could find it without heavy 2 liquid density separation -- 3 And it was very puzzling because the 4 CSM method was showing lower results half the 5 time than the ISO method without any heavy liquid 6 density separation. But most of the time, it 7 showed a higher percentage of smaller -- smaller 8 structures. 9 Say you would have a concentration of, 10 you know, .001 or .005 for the ISO method without 11 heavy liquid density separation, and then the CSM 12 method, which is supposed to be more sensitive, 13 you know, you might have a .003, lower amount, 14 but you had more structures, more small 15 structures. 16 It was kind of baffling for a little 17 while, until we looked -- went and looked in the 18 pellet. And there was more in the pellet than 19 there was in the light fraction, which made no 20 sense. 21 Came up with various theories on why, 22 but, at the end of the day, it just was about how 23 long you spin it. That's why I saw the time jump 24 up to 72 hours.</p>
<p style="text-align: right;">Page 99</p> <p>1 showed some of that, as well as talking about 2 the -- the heavy liquid density for amphiboles, 3 both PLM and -- and TEM, and also showed FDA the 4 protocol that Colorado School of Mines had. I 5 think it was in there, you know, '73, and how 6 they developed it. And then it went from there. 7 We tried to use the NIST standard to -- 8 to verify the percentages, and -- and we had too 9 high percentages, and that's when we went to the 10 Calidria, somewhere in that time frame. 11 In the -- in the chrysotile from Union 12 Carbide, the RG -- the SG-210 and the RG -- 13 I'm just having a -- RG-44, was it? 14 Something like that. It's in the report. 15 -- and saw that it had a bunch of small 16 ones, and we saw that it was giving, and so our 17 PLM analyst at the time, Paul Hess, started 18 figuring out very quickly on what to look for. 19 And that's when we also started doing 20 the standards, and I wanted to make sure we 21 weren't misidentifying fibrous talc or talc 22 plates on edge. 23 And we went through a series where once 24 Paul Hess and another analyst here got to the</p>	<p style="text-align: right;">Page 101</p> <p>1 I think we -- you know, and we want to 2 back off that. And that's giving us, I think, 3 the most efficient -- 4 And, finally, I did a very simple 5 experiment. Just put the Calidria or the 6 chrysotile SG-210 in the heavy liquid density 7 material by itself, no talc, no anything, spun it 8 for 72 hours, and every bit of it was up in the 9 top. 10 Now, the talc issue causes the material 11 to separate it out. So you think about you're in 12 a tube -- or say you're in a tunnel. You've got 13 to go straight up. But there's these big ceiling 14 tiles all on top of you. And the ceiling tiles, 15 because of the gravity, is beating full down. So 16 you've got to fight your way through it. And 17 that's what was happening. 18 Also, the surface charge of chrysotile 19 is positive, and the surface charge of talc is 20 negative. They're sticking to each other. So we 21 started looking at maybe a way to change the 22 surface charge. And we went -- we've gone to 23 organic heavy density liquid separation, but 24 that's -- that material, methylene iodine, it</p>

<p style="text-align: right;">Page 102</p> <p>1 is -- it's fairly dangerous.</p> <p>2 So we're using a water-soluble one, and</p> <p>3 we're -- we're working on that to look at the</p> <p>4 centrifuge time.</p> <p>5 So it's just -- it was not as</p> <p>6 straightforward as the Colorado School of Mines</p> <p>7 laid out. They didn't put any of this in it.</p> <p>8 They didn't look at this.</p> <p>9 And you can look at their</p> <p>10 concentrations, that they had 0.00001 to 7</p> <p>11 percent. That's a lot higher -- that's a lot</p> <p>12 worse detection limit than what we're seeing. So</p> <p>13 I think they were losing material in their</p> <p>14 analysis. But they did do really good work.</p> <p>15 You know, from there, we -- so we go,</p> <p>16 okay. We -- we did the 7.2, which didn't make</p> <p>17 any sense, but that was giving us the highest</p> <p>18 return. We now got the 2.65, and we may lower it</p> <p>19 from there.</p> <p>20 Q Okay. Thank you.</p> <p>21 Circling back to the beginning of the</p> <p>22 story, so you say February 4th, 2020, is the day</p> <p>23 that you and others give the presentation to the</p> <p>24 Interagency Working Group; right?</p>	<p style="text-align: right;">Page 104</p> <p>1 Group --</p> <p>2 MS. O'DELL:</p> <p>3 Excuse me. He was not finished with</p> <p>4 his answer.</p> <p>5 So if you could --</p> <p>6 MR. EWALD:</p> <p>7 Q Oh. Go ahead.</p> <p>8 A So the chairman of the committee that</p> <p>9 invited me to come talk sent FDA a letter saying</p> <p>10 that they would not support the methodology</p> <p>11 for -- for regulating cosmetic talc unless they</p> <p>12 used the heavy liquid density separation that I</p> <p>13 proposed at the FDA meeting.</p> <p>14 Q I'm sorry. The -- I got lost there.</p> <p>15 You're talking about what you proposed after --</p> <p>16 at the February 4th, 2020, meeting?</p> <p>17 A No. What I -- what I got asked, which</p> <p>18 was the most sensitive method to use at the -- at</p> <p>19 the testimony in front of Congress. And they</p> <p>20 wrote a letter to FDA, said that they needed to</p> <p>21 incorporate this in anything they did or they</p> <p>22 wouldn't support it.</p> <p>23 Q And "they" being the committee or -- or</p> <p>24 some subset of the committee?</p>
<p style="text-align: right;">Page 103</p> <p>1 A Correct. You know, you could either --</p> <p>2 it wasn't that you were invited to do it. You</p> <p>3 know, if you wanted to give a presentation, you</p> <p>4 just had to put an abstract in, all your -- you</p> <p>5 know, all your things and what you were gonna</p> <p>6 talk about, and they could either say yea or nay.</p> <p>7 And, so, that's -- that's what I did.</p> <p>8 I talked about that the amphibole was pretty</p> <p>9 clean, that we weren't having really any issues</p> <p>10 with that. You know, and -- and that had some</p> <p>11 effect on it, because the -- the -- the</p> <p>12 Interagency Working Group wanted their</p> <p>13 recommendations as to look at research to look at</p> <p>14 the heavy liquid density separation for</p> <p>15 amphiboles only.</p> <p>16 Because at the time that we gave the</p> <p>17 talk and also in December 10th of 20-- of 2019</p> <p>18 at FDA, you know, I told them that chrysotile was</p> <p>19 not feasible at the moment, or at this time. So</p> <p>20 their recommendation to FDA was to use the heavy</p> <p>21 liquid density separation for amphibole asbestos</p> <p>22 for their -- for their work, their working group.</p> <p>23 But the --</p> <p>24 Q Didn't you tell the Interagency Working</p>	<p style="text-align: right;">Page 105</p> <p>1 A Well, it had the chairman's name on it,</p> <p>2 so I'm assuming it was the subcommittee.</p> <p>3 Q But with respect to a February 4th,</p> <p>4 2020, meeting, you talked about amphibole, but</p> <p>5 you recall telling the audience on February 4th,</p> <p>6 2020, that MAS had cracked the code on PLM heavy</p> <p>7 liquid separation; right?</p> <p>8 A We didn't crack it, but I don't think</p> <p>9 we got all the codes.</p> <p>10 Q But that's -- that's not what you told</p> <p>11 the Interagency Working Group on February 4th,</p> <p>12 2020; right? You said you cracked the code.</p> <p>13 A I did say that. But I did show what</p> <p>14 data we had so far, and that it not really was</p> <p>15 ready for prime time.</p> <p>16 Because you have to understand, when</p> <p>17 you say crack the code, the prevailing thought in</p> <p>18 the -- was that you could never do heavy liquid</p> <p>19 density separation to separate chrysotile out of</p> <p>20 talc. It was in -- the closest they came to</p> <p>21 anybody saying that was in the ISO 22262-2,</p> <p>22 chapter -- I mean section 16, like, second page,</p> <p>23 and that was, you know, Dr. Eric Chatfield put</p> <p>24 that method together, where he stated it's</p>

<p style="text-align: right;">Page 106</p> <p>1 theoretically possible to separate chrysotile out 2 from talc, but it's not practical. 3 And, so, my opinion about that 4 statement is he's absolutely right. It's past 5 the theoretical portion, because it can be done, 6 but it's not very practical. It's a lot of work 7 involved. And he did a lot of work to get it to 8 this point. 9 And, you know, to me, this would have 10 been a -- a -- a Ph.D. project at a research lab, 11 at a university somewhere. You know, Colorado 12 School of Mines, they probably had graduates 13 working on this and they came up with the method 14 in 1973. 15 But we're not a research lab. I mean, 16 we don't get funding from grants and et cetera to 17 work on stuff like this, so we've got to do it on 18 our own time when we're not doing other work. So 19 it takes awhile. 20 Q We'll get back to the February 4th, 21 2020. But when you talk about not funding for 22 PLM chrysotile work, are you testifying that you 23 did not receive any funding from plaintiff 24 lawyers in creating the PLM chrysotile method</p>	<p style="text-align: right;">Page 108</p> <p>1 this stuff. 2 Q Right. And, so, am I right that's 3 50,000 -- five zero thousand? 4 A For a single case. 5 Q Okay. 6 A But not 50,000 for all six bellwether 7 cases. I think they're -- because they're all 8 together at the same time. So you've got -- Rico 9 and et cetera, I think it was around 150 or 175 10 or something for all six cases. 11 Q All right. So you were talking about 12 the initial work being done on the PLM chrysotile 13 method about four weeks before February 4 of 14 2020, so we're talking some point in December 15 2019? Is that right? 16 A Sometime before that. And not to 17 the -- not to the level that -- 18 Because I was asked about chrysotile, I 19 think, in the -- in the 2019 hearing in front of 20 Congress, and I think I said it wasn't -- hasn't 21 been done yet. 22 Q Right. 23 But around December of 2019, MAS starts 24 working on, in earnest, a PLM chrysotile method.</p>
<p style="text-align: right;">Page 107</p> <p>1 that MAS uses? 2 MS. O'DELL: 3 Object to the form. 4 A Hold on for a second. 5 MS. O'DELL: 6 Let's go off the record for a moment, 7 please. 8 (OFF THE RECORD.) 9 VIDEOGRAPHER: 10 Back on record. Time is 2:42. 11 MR. EWALD: 12 Q Doctor, I'll just repeat the question 13 or approximate it. 14 How much funding has MAS received from 15 plaintiffs' lawyers in relation to development of 16 the PLM chrysotile method that MAS uses? 17 A I mean, we just charge for the 18 analysis. 19 Now, what we did -- like NavStar's 20 having funding -- is -- 21 You know, you haven't got to this yet. 22 -- is raise our retainer rates so that 23 we can have some excess funds to help pay for 24 equipment, et cetera, and time being spent on</p>	<p style="text-align: right;">Page 109</p> <p>1 Fair? 2 A Well, it's hard to say earnest. It's 3 like we're doing other stuff. So maybe an hour 4 here, an hour there, you know, let's analyze it 5 doing this, let's try this, let's go to a 6 different, you know, heavy liquid density 7 separation and count it, and on and on. I mean, 8 it wasn't a -- it wasn't like when I was in 9 graduate school getting my Ph.D. You know, you 10 got there in the morning and you worked all day 11 on this stuff. 12 Q Okay. You start -- MAS starts on 13 working on PLM chrysotile method around December 14 2019. Fair? 15 A Somewhere around there, plus or minus a 16 month or two -- no. Plus or minus a month or 17 weeks. But -- 18 Because I know what information I gave 19 out at the -- in front of the FDA, and it 20 certainly wasn't developed. But we were finding. 21 Q But -- so where did the idea come from? 22 A To -- which -- which idea is that? 23 Q Where did the idea come from for using 24 PLM to analyze chrysotile in talc?</p>

<p style="text-align: right;">Page 110</p> <p>1 A Because Colorado School of Mines was 2 using PLM to find the chrysotile in the talc. 3 The Johns Manville research center was doing 4 primarily PLM to find asbestos in various types 5 of samples. They analyzed -- and they were using 6 the proposed FDA method -- I think it was '75, 7 '76 -- that was based solely on refractive 8 indices, basically what we're doing now. 9 But that method took an awful long time 10 to do, because the results were in numbers of 11 fibers in bundles per milligram, not percentages. 12 And they analyzed thirteen samples from one of 13 the manufacturers, but I think they were all from 14 Montana, and they said out of the thirteen, ten 15 were positive, and they were finding significant 16 amounts, and the other two or three they said 17 could possibly, you know, be contaminated. 18 But everybody who did this method was 19 complaining on how long it took. And, so, FDA, 20 everybody, I think, ganged up on FDA, and FDA 21 didn't go forward -- 22 I mean, they published the method in -- 23 published it, and people were trying it, but they 24 said it took too long. It was too tedious. And</p>	<p style="text-align: right;">Page 112</p> <p>1 positive, you have to do another analysis. So -- 2 and XRD has such a poor detection limit. Would 3 be too many -- too many false positives. 4 Oh, you had mentioned earlier that what 5 is the consequences of having a 50 percent 6 efficiency versus an 80 to 90 percent efficiency 7 of getting the concentration. Well, the 8 consequences are that 50 percent will have a 9 poorer analytical sensitivity or detection limit 10 than the 80 to 90 percent. 11 So the consequences are potential false 12 negatives, because you haven't harvested all the 13 chrysotile in there that you can, and the -- and 14 the less chrysotile you have in there that's 15 sitting in other parts of the sample, you reduce 16 your ability to have a really solid detection 17 limit. 18 Q So why -- why, in or around December 19 2019, when MAS started looking at a heavy liquid 20 separation method for chrysotile, did you not try 21 TEM? 22 A Well, let me think back five years. 23 Because of the size that we're dealing with -- 24 and I think I've stated this a number of times --</p>
<p style="text-align: right;">Page 111</p> <p>1 they're right. This is a tedious method to find 2 chrysotile. So they had a range of IRs it had to 3 be for chrysotile and then a range of IRs that it 4 had to be for amphiboles. 5 Q All right. So -- 6 A There's others who did that, too. I'm 7 trying to think who else. 8 So the PLM came from Colorado School of 9 Mines using PLM and finding chrysotile in three 10 out of four samples. 11 Q Okay. Colorado School of Mines also 12 used during that time XRD in connection with 13 analyzing talc for the presence of chrysotile in 14 its heavy liquid separation method; right? 15 A Yeah, you can use XRD. I -- I still to 16 this day hold that it's a worthless method, 17 because if it's positive, you've got to do PLM 18 anyway, or TEM. And, also, the problem with it 19 is -- 20 At least if you're using the J4 method, 21 you know, there's a -- to me, there's now an 22 issue, very significant issue with that. I think 23 I have it in the report. But I don't have -- 24 You know, if you get XRD and it's</p>	<p style="text-align: right;">Page 113</p> <p>1 one, there is absolutely no regulation anywhere, 2 not by the EPA, not by the International 3 Standards Organization, not by OSHA, not -- not 4 by NIST, not by NIOSH, that if you have a 5 positive chrysotile, PLM, you're not required to 6 go out and get a second opinion on that. 7 And, as I've said many times, I thought 8 it would be better that before we did this heavy 9 liquid density separation and TEM, that we knew 10 exactly what our recovery rate was and how well 11 it was working. 12 With the Blount method on PLM, it was 13 pretty much all laid out. We just used that for 14 TEM. We knew what the detection -- you know, 15 that -- what we were dealing with there, and we 16 started right off the bat with TEM and finding, 17 you know, anywhere from 65, 75, 80 percent 18 positives. So that wasn't a hard jump. The 19 chrysotile -- 20 And, you know, we had protocols. 21 International Standards Organization had a 22 protocol for that published -- and that one -- 23 The ISO protocol said you can use PLM 24 SEM or TEM or XRD. Do whatever you want, but use</p>

<p style="text-align: right;">Page 114</p> <p>1 the heavy liquid density for the separation. 2 But you're looking at, you know, 3 well-respected individuals and scientists, and 4 they're saying things like, "oh, well, that's not 5 very practical." So we stayed away from it. 6 Because you've got such a close difference 7 between what the density of talc is versus the 8 density of chrysotile. 9 So I wanted to make sure that we're 10 getting the highest probability, and if I had the 11 best detection limit and I can't find it by PLM 12 or TE- -- if I can't find it by TEM, then, okay, 13 something's going on. 14 Q But why wouldn't you start, as you did 15 with the amphiboles, with TEM with heavy liquid, 16 which has a greater sensitivity than PLM? 17 A For TEM on chrysotile? 18 Q Yes. 19 A Well, if you think about the issues we 20 had on solving technical issues as we go along, 21 we would have been sitting there with -- with -- 22 Like, the first time we ran -- the 23 first time we ran the standards with TEM to see 24 what our detection limit was, our detection limit</p>	<p style="text-align: right;">Page 116</p> <p>1 through all those steps. We have to take the -- 2 you know, the hundreds and hundreds of thousand 3 dollar instrument and then go, and it just didn't 4 make any sense to me as a scientist until we're 5 ready to say, okay, this is the best prep ever. 6 If we don't see it with this, we're never gonna 7 see it. 8 But in the -- 9 Q But that's not -- 10 Go ahead. 11 A But if you have poor prep and you're 12 doing it over and over and you don't find it, 13 well, what was the detection limit? What's this? 14 And we knew that it was -- that going along doing 15 the PLM would be the fastest -- the fastest way 16 to verify that it is in there. 17 Q Well, that was the -- 18 When you started for the first time 19 with experimenting on analyzing talc for the 20 presence of amphiboles using heavy liquid 21 separation, you chose TEM; right? 22 A Chose that right off the bat, because 23 that made the most sense. 24 Q And, then, when you had the same choice</p>
<p style="text-align: right;">Page 115</p> <p>1 was like .1. We knew that's not what was in 2 there. It's -- we -- we had to solve a lot of 3 issues along the way. 4 I mean, you know, this was really a 5 classic example of the advancement of science. 6 The theory there is you can do it. Practically, 7 you have to work on it. 8 Q But when you were presumably deciding 9 between whether or not -- 10 Well, let me just ask. Who decided to 11 use PLM to try to find chrysotile in talc at MAS? 12 A That was me. 13 Q Okay. 14 A And you have to think about what you're 15 doing. Using a PLM method in sample prep versus 16 a TEM sample prep is -- is worlds of differences. 17 On one hand you've got a -- you know, that was 18 when we were using those old PLM scopes. You 19 have a two-thousand-dollar microscope, and you 20 can -- the sample preparation is about the same 21 for the two for spinning them down and moving 22 them out, but you can get it into the PLM and do 23 a fair number of samples and take a look and see 24 how it's going, where TEM, you've got to go</p>	<p style="text-align: right;">Page 117</p> <p>1 as it came to chrysotile, you chose PLM, not TEM; 2 right? 3 A Well, we're talking four years between 4 the time we started with PLM -- with TEM. And, 5 in fact, I had testified at one time that I 6 didn't think PLM was gonna work. But as we went 7 along, started looking at what we needed to do to 8 make that work versus just your regular everyday 9 asbestos-added products for amphiboles, then it 10 changed my mind. 11 You know, once you see additional 12 evidence that this is a good method, as long as 13 you're going to spend the time and use heavy 14 liquid density, just like Alice Blount 15 published -- 16 But, to me, the TEM for amphibole was 17 gonna be a lot more sensitive than just PLM 18 method. 19 Now, this might be reversed for 20 chrysotile. I don't know yet. But I have to get 21 the most efficient harvest of chrysotile out of 22 the cosmetic talc so I know that, if I can find 23 it or not find it, it's not missing something, 24 that I don't have a good prep, because</p>

<p style="text-align: right;">Page 118</p> <p>1 preparation is everything for a TEM analysis.</p> <p>2 Q Well, if you are correct, the</p> <p>3 finding --</p> <p>4 Withdrawn.</p> <p>5 If MAS is correctly finding chrysotile</p> <p>6 in Johnson & Johnson talc using PLM, then you</p> <p>7 should be able to identify that on TEM if you</p> <p>8 look long enough. Correct?</p> <p>9 A If -- if you look long enough,</p> <p>10 et cetera. That -- it doesn't work. You need,</p> <p>11 you know, you need to have the methodology down.</p> <p>12 And, again, once you say it's there by PLM,</p> <p>13 you're not required to do anything else. We are</p> <p>14 gonna do something else so I can publish it.</p> <p>15 Q Why do you feel like --</p> <p>16 Well, what else are you going to do?</p> <p>17 A Well, we'll get to where --</p> <p>18 If I'm gonna publish this, I want to</p> <p>19 publish and say this is the best, most efficient</p> <p>20 method we found, and these are the reasons why.</p> <p>21 Q And what do you have to do before you</p> <p>22 get to that point in time?</p> <p>23 A Well, I've got to finish up these --</p> <p>24 I've got to finish up using the 1.560. You know,</p>	<p style="text-align: right;">Page 120</p> <p>1 Italian and using Montana, using et cetera. I</p> <p>2 didn't think I was ever gonna see you guys again.</p> <p>3 Q So is it your contention that you</p> <p>4 haven't tested an MDL bottle because there was a</p> <p>5 period of time that J&J was in bankruptcy?</p> <p>6 MS. O'DELL:</p> <p>7 Object to the form. Misstates his</p> <p>8 testimony.</p> <p>9 A No. I didn't test any of it because</p> <p>10 the time it really -- we started, you know,</p> <p>11 really solving issues, you guys went bankrupt.</p> <p>12 So I focused on others so that we could take a</p> <p>13 look at Italian, we could take a look at Brazil,</p> <p>14 we could take a look at Guangxi, the four or five</p> <p>15 mines there. And as we got going along, you</p> <p>16 know, we got better and better at seeing these</p> <p>17 very small structures.</p> <p>18 Now, the next step is to get it to that</p> <p>19 one -- to get it to the level I'm satisfied with</p> <p>20 so that, you know, we can do TEM and finally put</p> <p>21 an end to the -- to, oh, you're misidentifying</p> <p>22 it. You're misidentifying it.</p> <p>23 MR. EWALD:</p> <p>24 Q Isn't there another way that you can</p>
<p style="text-align: right;">Page 119</p> <p>1 there's eight -- seven or eight samples there.</p> <p>2 Each of those are gonna take hours so that I have</p> <p>3 validated the concentrations by PLM. Then we</p> <p>4 have to go back and redo the TEMs because we're</p> <p>5 using 1.560. And we may adjust the heavy liquid</p> <p>6 density a little bit more, and that's it. But</p> <p>7 that's -- you're talking months of work.</p> <p>8 Q Have --</p> <p>9 Am I correct that you have not analyzed</p> <p>10 any of the MDL samples by PLM for the presence of</p> <p>11 chrysotile?</p> <p>12 A That's correct. We have not.</p> <p>13 Q Why not?</p> <p>14 A Number one, we weren't asked to do it.</p> <p>15 Number 2, we analyzed -- we have</p> <p>16 analyzed some -- you know, we have analyzed a</p> <p>17 number of samples from Vermont. We've analyzed a</p> <p>18 lot of samples from Italian, but not just -- not</p> <p>19 just Johnson Baby Powder samples.</p> <p>20 So we never -- we never did it because</p> <p>21 we were doing it on a bunch of other things.</p> <p>22 And, you know, quite frankly, J&J was in</p> <p>23 bankruptcy, so we focused in on other</p> <p>24 manufacturers that were using, you know, using</p>	<p style="text-align: right;">Page 121</p> <p>1 put an end to that?</p> <p>2 A Is there another way what?</p> <p>3 Q To put an end to that.</p> <p>4 MS. O'DELL:</p> <p>5 Object to the form. Vague.</p> <p>6 A I mean, it should put an end to it --</p> <p>7 it should put an end to it. I mean, the talk --</p> <p>8 the suggestion that we are misidentifying fibrous</p> <p>9 talc are absolutely wrong. The birefringence is</p> <p>10 so easy in a clear way to distinguish between</p> <p>11 these two biaxial minerals. I don't understand</p> <p>12 how they can keep saying this. It doesn't make</p> <p>13 any sense to me.</p> <p>14 MR. EWALD:</p> <p>15 Q Has any -- are you aware of any</p> <p>16 scientist outside of MAS that has analyzed a</p> <p>17 bottle or sample from a bottle of talc by PLM and</p> <p>18 reported chrysotile?</p> <p>19 A Um, I don't know. I mean, I don't know</p> <p>20 what different scientists are out there. I don't</p> <p>21 know what's been done as consulting experts.</p> <p>22 What I do know is not one scientist out</p> <p>23 there has provided any authoritative information</p> <p>24 about polarized light microscopy that shows that</p>

<p style="text-align: right;">Page 122</p> <p>1 we are misidentifying fibrous talc for 2 chrysotile. It makes absolutely no sense. 3 Either they don't understand birefringence or 4 they don't understand the PLM process or they 5 don't understand how birefringence is measured, 6 and they probably don't understand about the 7 Michelle Levy charts where you do a -- you 8 compare your lowest -- your lowest refractive 9 indice [sic] to your highest refractive indice 10 [sic] and then you look at the -- the width of 11 the structure, PLM, and the width will cause a 12 difference in your birefringence. And a 13 difference in birefringence can only happen if 14 the width is causing a difference in the 15 refractive indices. 16 Q Dr. Longo, are you aware of anyone in 17 the world that has reviewed your images and data 18 from MAS identifying chrysotile by using PLM and 19 publicly agree with it? 20 MS. O'DELL: 21 Objection to the form. 22 A Yes and no. Yes, they have agreed, 23 but, no, they're not willing to go publicly with 24 it. So...</p>	<p style="text-align: right;">Page 124</p> <p>1 thousands of experts that are all involved in 2 this. There's like, what, six? Five? 3 And I'm not saying they're incompetent. 4 I just don't understand how they can miss the 5 birefringence on chryso- -- on talc versus the 6 chrysotile. You're talking about five orders of 7 magnitude difference. Yeah, you'll get a yellow 8 gold, but it's bright versus a more muted yellow 9 gold. And you look at your data, and nobody's 10 been able to explain where I have intergrowths 11 with both talc and chrysotile in both parallel 12 and perpendicular direction. And when you look 13 at them, it's very obviously there's something 14 different there. 15 MR. EWALD: 16 Q Well, you talked about in this 17 litigation. But would you agree with me that 18 submitting your methods, the scrutiny of the 19 larger scientific community is a component of 20 good science? 21 MS. O'DELL: 22 Object to the form. 23 A No, I won't agree with you. I would 24 agree --</p>
<p style="text-align: right;">Page 123</p> <p>1 MR. EWALD: 2 Q Okay. Who agrees? 3 A I'm not saying. I -- I gave them my 4 word that I would not use their name. 5 Q Okay. So we have one individual who 6 you say agrees with you but isn't willing to 7 actually publicly agree with you. Fair? 8 MS. O'DELL: 9 Object to the form. 10 A It's fair that they -- they don't want 11 to be involved in the litigation. But I don't 12 think that has anything to do with anything. 13 MR. EWALD: 14 Q Well, you just said -- you've just been 15 criticizing the people that have commented on 16 your work as basically how can they be so 17 incompetent. I want to know if there's anyone 18 that you can identify by name outside of MAS that 19 says yes, Dr. Longo is right in identifying 20 chrysotile through PLM. Anybody? 21 MS. O'DELL: 22 Object to the form. 23 A You know how -- yeah. It's kind of 24 interesting you say that. It's like there's</p>	<p style="text-align: right;">Page 125</p> <p>1 I mean, I think, as a good scientist, 2 you want to get the best product forward. And 3 I've told you that for a commercial lab, it is 4 incredibly difficult to spend the time that we 5 need to finish up all this. Because you guys, 6 it's like you think, okay, well, we should have 7 it right away. So, you know, I can't help you 8 there. 9 This is an advancement in science. The 10 fundamentals of why, nobody has pulled anything 11 out to say, "oh, it's different." You know, they 12 go, "oh, well, he's misidentified cellulose 13 fibers." 14 No. If you look at the refractive 15 indices for cellulose, a ribbony cellulose, no 16 competent PLM analyst would have a problem with 17 that. 18 The difference between fibrous talc or 19 platy talc on edge and chrysotile is the 20 birefringence is incredibly significant. I just 21 don't understand how that -- you know, the 22 mistake. I'm not saying they're incompetent. 23 I'm just saying it doesn't make any sense to me. 24 MR. EWALD:</p>

<p style="text-align: right;">Page 126</p> <p>1 Q So you are -- or MAS is currently 2 finding chrysotile in nearly a hundred percent of 3 the talc containers that it looks at using the 4 PLM chrysotile method; right? 5 MS. O'DELL: 6 Object to the form. 7 A It has. And your point as well? 8 MR. EWALD: 9 Q I'm getting there. I'm putting it all 10 in one question. 11 So the -- that's -- if indeed there is 12 asbestos in nearly every talc container that's on 13 the market, that is something that presents a 14 public health issue; correct? 15 A Presents what? 16 Q A public health issue. Correct? 17 MS. O'DELL: 18 Object to the form. 19 A I would agree. 20 MR. EWALD: 21 Q And when you told the FDA and the 22 Interagency Working Group on February 4th, 2020, 23 that you cracked the code and could analyze 24 PLM -- you could analyze chrysotile using PLM</p>	<p style="text-align: right;">Page 128</p> <p>1 Q Are you suggesting that the FDA and the 2 broader Interagency Working Group has not 3 contacted you because some talc has gone off the 4 market? Is that what you're suggesting? 5 A No. 6 MS. O'DELL: 7 Object to the form. 8 A No. I'm not saying that. I don't 9 think they've contacted anybody. They're working 10 among themselves. So, you know, have they 11 contacted Matt Sanchez? Have they contacted Alan 12 Seagrave? The only person they contact is AMA, 13 who won the contracts. 14 MR. EWALD: 15 Q Well, have you told AMA, "hey, guys, 16 you're using the wrong PLM method because what 17 I'm doing right now, I'm finding it a hundred 18 percent of the time and you haven't found it 19 once?" Right? 20 MS. O'DELL: 21 Object to the form. 22 A I haven't found it a hundred percent of 23 the time, and I don't know why that's so obvious 24 to have a problem with people. And I'm gonna</p>
<p style="text-align: right;">Page 127</p> <p>1 heavy liquid separation, has anybody from any of 2 the Interagency Working Group contacted you for 3 more information? 4 A Nobody has contacted me. I think the 5 public health issue has dwindled from this. I 6 don't think it's -- at least to me -- 7 You know, I understand that Johnson & 8 Johnson is now taking the talcum powder off the 9 international world. You know, first it was, 10 what, in 2022, North America? So I think this 11 has -- this work on this has helped motivate -- 12 It's just my opinion, and probably, you 13 know, whatever y'all think. 14 -- motivated to get these products off 15 the market. 16 Again, I would like to be at a 17 university so I could get this out sooner, but I 18 know this is gonna be heavily scrutinized. I've 19 seen what's happened in the past. You know, you 20 get something out there, and there's a lot of 21 pushback. So I prefer to get it all where we can 22 show every aspect of this, show how -- what we're 23 seeing and why. And I think it will be a good 24 paper.</p>	<p style="text-align: right;">Page 129</p> <p>1 call AMA? They know my testimony. They know 2 what I do. I'm gonna call Sanchez? I'm gonna 3 call Alan Seagrave? 4 MR. EWALD: 5 Q There are professional organizations as 6 well. People get together and talk about these 7 issues; correct? 8 A You know, it's sort of like, gee, you 9 haven't told anybody, and why not, and why don't 10 you go out there and start banging the drum? And 11 I prefer to have the science to the point where 12 I'm doing -- it has the best sensitivity and we 13 can show it. 14 Cos- -- you know, cosmetic talc's not 15 sold anymore in this country, that I can tell, 16 unless you -- unless you go to eBay or -- 17 But you walk in a store, you can't find 18 it anymore, which is a good thing. Because 19 you're right. I'm thinking that, you know, when 20 you're using these products as a body powder and 21 you're putting it on infants and children, it's 22 not a good thing. 23 MS. O'DELL: 24 Hey, John, we've been going about an</p>

<p style="text-align: right;">Page 130</p> <p>1 hour. Why don't we take a short, short break, 2 about five minutes? 3 MR. EWALD: 4 Sure. Let's do it. 5 VIDEOGRAPHER: 6 Off record. The time is 3:12. 7 (OFF THE RECORD.) 8 VIDEOGRAPHER: 9 Back on record. Time is 3:24. 10 MR. EWALD: 11 Q Okay. Doctor, right before we got back 12 on the record, you indicated that you did 13 identify the two tests that I had mentioned by 14 MAS's M number. Can you briefly just say on the 15 record which two tests those are? 16 A I'm sorry? 17 Q I wanted you to say on the record the 18 two M numbers that you identified off the record. 19 A MAS project M71740, the Kirch Johnson 20 Baby Powder container and report issued on 21 2-15-2024, and then we have M71730, the Jeanie 22 Henderson container and report issued in November 23 28 in 2023. 24 Q And if we combine those two analyses</p>	<p style="text-align: right;">Page 132</p> <p>1 that work? 2 A I don't recall any -- we actually had 3 anybody funding that work. And, you know, use -- 4 And I was thinking about what we just 5 talked about. The use of heavy liquid density 6 separation for minerals is something that is so 7 well established in the scientific community. 8 It's nothing -- there's nothing unique, there's 9 nothing -- 10 There's hundreds and hundreds of papers 11 out there published about using heavy density 12 liquid to use [sic] minerals. In this particular 13 case, we're just using -- we're going after a 14 different mineral that people haven't gone after 15 in the past, that I can tell, for -- for 16 chrysotile using a -- not a novel analytical 17 method. PLM is not novel. It's, you know, it's 18 been around from the late '60s, early '70s. The 19 use of -- it's just another analytical technique 20 for separating out a sample. It's just taking us 21 longer because we're not a research lab. 22 But, you know, you can go on TV and 23 watch heavy liquid density separation on the 24 shows where they're panning for gold. That's</p>
<p style="text-align: right;">Page 131</p> <p>1 with the analyses contained in your fourth 2 supplemental report, April 29th, 2024, that 3 together represents the entirety of the MAS PLM 4 chrysotile analyses that have been produced as it 5 relates to J&J talc? 6 A As far as I know, yes. 7 Q Okay. It's not a trick question. It's 8 the same thing I have. 9 A No, there's no others. One will show 10 up, and then people aren't too kind. 11 Q Well, let's circle back. When we were 12 talking about the early days of MAS's work on PLM 13 and chrysotile circa roughly December 2020, who, 14 if anyone, was funding that initial work? 15 MS. O'DELL: 16 Object to the form. 17 John, I think you misstated the year. 18 You said 2020. 19 MR. EWALD: 20 I think I did, too. Let's try again. 21 Thank you. 22 Q In -- in or around December of 2019, 23 when MAS was beginning its PLM chrysotile 24 methodology work, who, if anyone, was funding</p>	<p style="text-align: right;">Page 133</p> <p>1 heavy liquid density separation. 2 Q Okay. So if that's the case, Doctor, 3 then why did you spend a decent amount of your 4 report and the deposition time earlier today 5 saying how J&J hid from the world this heavy 6 liquid separation method for chrysotile that 7 never would have been -- seen the light of day if 8 not for litigation if it's -- everyone knows 9 about it and it's so well established? 10 MS. O'DELL: 11 Object to the form. 12 A Well, if you have a method and you 13 start analyzing it and you're getting a number of 14 positive samples for asbestos that you did during 15 the earl- -- during the development of this 16 method, it wasn't me who said this but it was a 17 J&J person that said that this concentration 18 method is not in the best interest of our 19 worldwide talc market. You're gonna start 20 putting out there that there's asbestos in your 21 product? That's what I think. 22 MR. EWALD: 23 Q Well, I'm sorry, Doctor. You didn't 24 answer my question, which is: If, as according</p>

<p style="text-align: right;">Page 134</p> <p>1 to you, it's so well established in the 2 scientific community, there are hundreds of 3 papers over decades that heavy liquid separation 4 is something that works, how could J&J have 5 engaged in this great coverup, as you posited, 6 preventing the scientific world from using heavy 7 liquid separation for chrysotile? 8 MS. O'DELL: 9 Object to the form. 10 A I don't think it was well known out 11 there that there was asbestos in cosmetic talc. 12 It certainly was not something I thought of early 13 on when I've been shown those transcripts from 10 14 to 20 years ago. 15 I can't answer why from J&J. Alls I 16 can answer is if you look at the Blount paper 17 where she goes into different references for what 18 she's using, especially when she starts talking 19 about separating out the pellet -- 20 And that's where we got the idea of 21 using liquid nitrogen, because she had references 22 in there for using liquid nitrogen to do this. 23 When you're doing your flotation, when 24 J&J and all the talc manufacturers out there do</p>	<p style="text-align: right;">Page 136</p> <p>1 Yeah. 2 Q You didn't decide to use the Colorado 3 School of Mines' method because it's a good 4 method? It was only because J&J had used it in 5 documents that you saw? 6 MS. O'DELL: 7 Object to the form. 8 A I used it because they showed it was 9 possible to separate out chrysotile from talc. 10 And they also, of course, showed that you can 11 separate out amphiboles from talc by using heavy 12 liquid density separation. And, also, the same 13 time we saw the -- when Windsor Mineral did their 14 own heavy liquid density research by Reynolds, 15 that they found asbestos using heavy liquid 16 density. They used standards. So it looked to 17 me like it was a fairly well-developed 18 methodology -- 19 Q You say fairly -- 20 Sorry. Go ahead. 21 A -- for amphiboles. You know, Eric 22 Chat- -- Dr. Chatfield had been using it for 23 years on vermiculite. Then he put together, you 24 know, the 22262-1 and -- well, 2, where then he</p>
<p style="text-align: right;">Page 135</p> <p>1 the beneficiation with flotation, they're using a 2 surfactant to help drive the talc particles to 3 the surface to be harvested. So they're -- 4 they're changing the surface tension there, and 5 they're concentrating it, trying to get rid of 6 the fines. That's why J&J was experimenting with 7 different surfactants, thinking they could 8 eliminate both chrysotile and/or tremolite out of 9 their product from the -- from the Vermont mines. 10 Now, you know, they didn't go tell the 11 world about it. It didn't work for both Argonaut 12 and Hammondsville. 13 So I just took a well-established 14 method and tried it because I saw that J&J had 15 done it and had found -- had positive samples for 16 chrysotile. That's the only reason I got started 17 in it. 18 Q So you didn't -- you didn't decide to 19 use Colorado School of Mines' method because you 20 thought it was a good method? 21 MS. O'DELL: 22 I'm sorry. Would you repeat that? I 23 couldn't hear the last part. 24 MR. EWALD:</p>	<p style="text-align: right;">Page 137</p> <p>1 says "here's how you do it, and you can use it 2 for all these different things, including 3 cosmetic talc, and once you do it, you can 4 analyze it by PLM or SEM or TEM or XRD, any one 5 of them." 6 Nowhere in there does it say you have 7 to do it for all of them, you know, you have to 8 go -- if you're gonna do it for PLM, you've got 9 to do it for TEM or you've got to do it for XRD. 10 He said here's the methods, the analytical 11 methods. 12 Q All right. Required or not, if you are 13 not able to identify a single person by name in 14 the deposition that will publicly agree with you 15 in your findings of chrysotile by PLM, isn't it 16 good scientific practice to then say "I'm going 17 to confirm this by TEM," for example? 18 MS. O'DELL: 19 Object to the form. 20 A I've already given you my -- my reasons 21 for that. We have not tried it yet for Johnson's 22 Baby Powder by TEM. 23 MR. EWALD: 24 Q What about another lab? Why not send</p>

<p style="text-align: right;">Page 138</p> <p>1 your samples to another lab to try to confirm it, 2 whether it's TEM or PLM chrysotile? 3 A I'm not sending it to -- you know, I'm 4 not going to be sending -- I'm not gonna send it 5 to another lab yet. I'm gonna -- until, you 6 know, it's time to write your papers, the paper. 7 Q Okay. And why is that? 8 A Why? Because that's what I feel would 9 be the best method in order to get it published, 10 and given the protocol for PLM. I'm sure we will 11 have TEM done by then. I want to put both 12 together in one paper, TEM and PLM. 13 Q If it's, as you say -- if, as you 14 say -- 15 Sorry. Withdrawn. 16 If, as you said, after coming back from 17 a break with counsel, right off the bat, that 18 what you were doing was not novel or analytical, 19 why is it so difficult for you to publish those 20 results if they are so well established? 21 MS. O'DELL: 22 Object to the form. 23 A The use of heavy liquid density 24 separation is really well established to separate</p>	<p style="text-align: right;">Page 140</p> <p>1 in the deposition, that the Blount amphibole 2 density separation method has been published; 3 right? 4 A It has. 5 Q And that an amphibole separation method 6 has -- described in ISO 22262-2; correct? 7 A Correct. 8 Q And there is at least a mention of 9 amphibole separation methods and the need for 10 interlaboratory work on those in the FDA 11 interagency White Paper; correct? 12 A I'm sorry. What was that last one? 13 Q The FDA interagency White Paper at the 14 end of December '22, they do talk about amphibole 15 density separation methods and the need for 16 interlaboratory testing of those; right? 17 A Yeah. They're proposing that if they 18 go through with the heavy liquid density 19 separation for amphiboles, which will be good. 20 Q Right. 21 A A lot of people are doing PLM analysis 22 on these cosmetic talcs, in my opinion, that 23 don't have a clue what the detection limits are 24 by PLM.</p>
<p style="text-align: right;">Page 139</p> <p>1 out minerals, to separate out all kinds of stuff, 2 anything that has two densities. I mean -- 3 Hand me that. 4 Here's something I used to take in to 5 junior high school to teach science classes for 6 an hour, and when they were doing densities, I 7 would take this in and say "I'm gonna show you 8 what heavy liquid density separation is. Let's 9 say that blue particles are the asbestos and the 10 white particles are -- are the talc. Oh. One 11 floats and one goes down to the bottom." 12 I mean, they sell this at a hobby 13 store. It is so well accepted about this kind of 14 stuff. So -- 15 But we're trying to separate that is a 16 little bit more difficult, two minerals that are 17 very close in density, very close in -- 18 And we're talking about a -- a -- a -- 19 you know, a trace amount. That's the only 20 difference here. But the actual science behind 21 what we do is not novel at all. It's just 22 another sample preparation method in the lab. 23 MR. EWALD: 24 Q Well, you were talking about, earlier</p>	<p style="text-align: right;">Page 141</p> <p>1 Q Yeah. 2 A That'd be the weight percent by TEM 3 that, in my opinion, where you have to do a 4 calculation on a made-up fiber size, that they 5 have a detection limit of 10 to the minus 7, 6 finding one structure, even though to find one 7 structure, one fiber, you know, you have a 8 detection limit of anywhere from 5 to 15 million. 9 So I was hoping, you know, that when -- 10 the Interagency Working Group can fix some of 11 these issues. That's why they're not 12 recommending, by TEM, weight percents. 13 They're -- they're -- they're more 14 recommending -- that's the FDA -- that they go 15 with fibers and bundles per gram. It provides 16 more information on the actual concentration of 17 any asbestos, in my opinion. 18 Q So even -- 19 Apologies for the computer issue. 20 So even after telling the FDA in 21 February 4th, 2020, that you had cracked the code 22 on separation of chrysotile heavy liquid 23 separation, that is not even mentioned in the FDA 24 White Paper or any of the appendices; correct?</p>

<p style="text-align: right;">Page 142</p> <p>1 MS. O'DELL: 2 Object to the form. 3 A No. It's just amphiboles. 4 MR. EWALD: 5 Q And I believe you testified earlier 6 today that your impression was that the 7 Interagency Working Group understood that your 8 PLM chrysotile method was not ready for prime 9 time? Was that your testimony? 10 MS. O'DELL: 11 Object to the form. 12 A I don't think I said that. But I 13 didn't really show any data, I think, for any 14 chrysotile being found in any. I just said this 15 is the basic procedure. 16 On the other hand, I had the data for 17 the amphiboles that presented, so I guess that's 18 why they only stuck with amphiboles. I mean, 19 I -- I don't have an inside knowledge of what FDA 20 decides or not decides, or the Interagency 21 Working Group. 22 MR. EWALD: 23 Q Yeah. You say you -- you would be 24 speculating if you were to be talking about why</p>	<p style="text-align: right;">Page 144</p> <p>1 MS. O'DELL: 2 Object to the form. 3 A I wasn't wrong at all. I was 4 absolutely right. Now, we had to get it worked 5 out, but I used a noncontroversial, very 6 well-established method, but it just had to be 7 tweaked here. It's not the method's fault. 8 It's -- it was a little bit more difficult than I 9 thought. 10 But as I sit here now, I am -- I was 11 right. I was right, what I stated to that -- 12 that group at the time. 13 MR. EWALD: 14 Q We'll go ahead and mark -- 15 THE COURT REPORTER: 16 It's 12, John. 17 MR. EWALD: 18 Okay. Thank you. I just got there. 19 12. 20 Q -- Exhibit 12 the slides that 21 accompanied Dr. Longo's February 4th, 2020, 22 presentation to the Interagency Working Group. 23 Doctor, does this look familiar? 24 A It does.</p>
<p style="text-align: right;">Page 143</p> <p>1 the FDA/Interagency Working Group decided not to 2 even mention your PLM chrysotile heavy liquid 3 separation method had supposedly cracked the 4 code; right? 5 MS. O'DELL: 6 Object to the form. 7 A I just don't know what FDA would be 8 thinking. I don't know how much, based on my 9 testimony in front of Congress where I was asked 10 about chrysotile and said that's not possible 11 yet, it's not possible, we don't have a method 12 for that yet. So -- so I don't know what FDA's 13 position was on that. 14 Q Did you ever follow up with the 15 Interagency Working Group to say that you were 16 wrong in saying that you cracked the code? 17 MS. O'DELL: 18 Object to the form. 19 A Did I ever follow up with them? No. 20 MR. EWALD: 21 Q Do you believe that you were wrong or 22 maybe overstated things a bit when you told them 23 in February 4 of 2020 that you had cracked the 24 code?</p>	<p style="text-align: right;">Page 145</p> <p>1 (DEPOSITION EXHIBIT NUMBER 12 2 WAS MARKED FOR IDENTIFICATION.) 3 MR. EWALD: 4 Q Okay. And the title on the first page 5 is "The Heavy Liquid Separation Method for the 6 Analysis of Cosmetic Talc to Detect Amphibole and 7 Chrysotile Asbestos." Right? 8 A You read that correctly. 9 Q Great. 10 Talking about sensitivity -- 11 MS. O'DELL: 12 Do you need to see it, Dr. Longo, or 13 are you good with it just on the screen? 14 THE WITNESS: 15 I'm good with it on the screen. 16 MR. EWALD: 17 Q Talks about how to increase TEM 18 sensitivity. Then you also have this brief early 19 history of HLS method for talc developed for J&J, 20 and you then say "the MAS LLC HLS analysis for 21 amphibole asbestos by PLM," and you lay out the 22 procedure that you had at the time. Correct? 23 A Correct. 24 Q Okay. And the next slide, you talk</p>

<p style="text-align: right;">Page 146</p> <p>1 about the MAS LLC HLS analysis for amphibole 2 asbestos by TEM, and you lay out your procedure 3 for that. Correct? 4 A Correct. 5 Q Okay. And then we have MAS LLC HLS 6 analysis for chrysotile asbestos by PLM, and you 7 lay out the procedure that MAS was using for this 8 at the time. Correct? 9 A Correct. 10 Q What aspect -- 11 Well, I'll just go line by line. 12 Stain 200 milligrams of cosmetic talc 13 with betadine, 2 percent iodine solution, filter 14 stain talc material and wash in alcohol/Di-water. 15 Do you still use that as part of MAS's 16 HLS analysis for chrysotile asbestos by PLM? 17 A No. As I discussed earlier in this 18 deposition, that the iodine worked really well 19 for the 1866b NIST chrysotile standards because 20 of the very large bundles that were in there. 21 Q Okay. 22 A But when we got to looking for it for 23 the size of the bundles of chrysotile that was in 24 the cosmetic talc, the 2 percent iodine solution</p>	<p style="text-align: right;">Page 148</p> <p>1 Colorado School of Mines, did they use 2.72? 2 A No. They never used 2.72. 3 Q Okay. 4 A They said less than 2.65. 5 Q Okay. 6 A But our initial trying everything, that 7 was being -- that gave the most. And it was 8 said -- you know, we had -- we had some technical 9 difficulties trying to repeat their stuff. 10 But, no, they didn't use 2.72 11 initially. Well, it's not what they put in their 12 final protocol. 13 Q Centrifuge at 500 rpm for 5 minutes, 14 then 1800 rpm for 5 minutes, is that still MAS 15 LLC HLS analysis for chrysotile asbestos by PLM? 16 A For this sample, we did it for 72 hours 17 at 21 degrees Celsius without breaking. 18 Q And at the time Colorado School of 19 Mines was doing analysis in 1974, did they use 20 the same centrifuge time? 21 A I'm not sure they published in there 22 what centrifuge time they were using. 23 This particular centrifuge time was 24 used by Reynolds in the -- the Windsor project,</p>
<p style="text-align: right;">Page 147</p> <p>1 did not absorb enough to it so it gave it any 2 ability to see it. So it just didn't work. And 3 I won't mention that -- other scientists who came 4 to the same conclusion. 5 And we were using betadine, but the 6 method called for pure iodine. The problem with 7 pure iodine, one, in order to get it, you have to 8 fill out a lot of paperwork for the DEA because 9 it's a precursor in meth productions. 10 And, two, once you made up the 11 solution, it only had about a two- -- a three- or 12 four-day shelf life. And we weren't working on 13 it all day long. And, again, we never used the 14 iodine for identification. It was just supposed 15 to help, and it didn't work. So we dropped that 16 pretty quick after this. 17 Q And the 2.72g/cc HLS, is that the same 18 that you use today for the heavy liquid? 19 A Today -- I'll just give you an update 20 on the very last one we did for Johnson & 21 Johnson. And this one -- 22 And this was the Kirch on 2-15-2024. 23 We used 2.65. 24 Q Okay. And do you recall in the 1974</p>	<p style="text-align: right;">Page 149</p> <p>1 where they hired him to look for amphiboles in 2 their product -- I mean in the -- in the -- in 3 their Vermont talc. And he found actinolite, and 4 he says he believes the other was anthophyllite. 5 He ran standards, and he showed that it was in 6 there. So I borrowed their centrifuge time. 7 Q Okay. The part about fine tweezer, 8 remove stained chrysotile bundles from filter and 9 place on glass slide, MAS doesn't do that 10 anymore -- right? -- because they don't stain the 11 particles. Right? 12 A That went pretty quickly. That 13 didn't -- that didn't last long. 14 Q Okay. And when you say "have validated 15 detection limit of approximately 0.0001 percent 16 by weight fibers per gram of talc," you're 17 talking about, quote, validation procedures that 18 were done internally by MAS; right? 19 A Correct. 20 Q Okay. And yet we've gone through the 21 various discrepancies, some of the discrepancies 22 between the MAS method and the Colorado School of 23 Mines method, but you, earlier today and in the 24 past have called this, what you were doing, just</p>

<p style="text-align: right;">Page 150</p> <p>1 the Colorado School of Mines method; right?</p> <p>2 A I'm doing what?</p> <p>3 Q All you're doing is not your method.</p> <p>4 It's the Colorado School of Mines method. That's</p> <p>5 what you say; right?</p> <p>6 MS. O'DELL:</p> <p>7 Object to the form.</p> <p>8 A I think it is Colorado School of Mines'</p> <p>9 method. They're the ones who said it could be</p> <p>10 done. I'm just tweaking it. It's not -- it's</p> <p>11 never gonna be the Longo method.</p> <p>12 MR. EWALD:</p> <p>13 Q Okay. What part -- what specific part</p> <p>14 of the Colorado School of Mines method for</p> <p>15 analyzing chrysotile with PLM still remains in</p> <p>16 your analysis today?</p> <p>17 A That we're actually using heavy liquid</p> <p>18 density separation, a well-established</p> <p>19 methodology, to -- to concentrate the chrysotile,</p> <p>20 just like they did, and show that it can be done.</p> <p>21 We'll probably end up with a -- a heavy liquid</p> <p>22 density that's less than 2.65. I believe that's</p> <p>23 where we'll end up. So we'll be using exactly</p> <p>24 what they said. And we're doing it by PLM, just</p>	<p style="text-align: right;">Page 152</p> <p>1 A Because what we were finding in the</p> <p>2 talc, as it turns out, was maybe a thousandths of</p> <p>3 the size of the type of bundles you see in the</p> <p>4 1866b. So it would not absorb enough of the</p> <p>5 pigment, I guess, for lack of a better word, that</p> <p>6 you could pick it out in the sample and then take</p> <p>7 tweezers and take that pinch and put it over in</p> <p>8 the -- on the slide so you could find it easier.</p> <p>9 It didn't work.</p> <p>10 Q In that time period, we'll say early --</p> <p>11 late 19- -- late 2019, early 2020, was Paul Hess</p> <p>12 comparing what he was seeing in the talc to the</p> <p>13 NIST 1866b standard?</p> <p>14 A He initially was using the 1866b</p> <p>15 standard at percentages. And when I finally</p> <p>16 caught up with him that he was doing that, I</p> <p>17 stopped him and said that's -- we have to go</p> <p>18 back; these are not at the concentrations because</p> <p>19 you're using too big of a standard. That's when</p> <p>20 the RG-144 came in, where we could then calibrate</p> <p>21 the analyst to look better for what the</p> <p>22 percentages were.</p> <p>23 Q And I'm sure this is my problem, but</p> <p>24 I'm trying to follow you. So the -- the</p>
<p style="text-align: right;">Page 151</p> <p>1 like they did.</p> <p>2 Q All right. So when we were talking,</p> <p>3 again, in the early stages of MAS's analysis of</p> <p>4 chrysotile by PLM, you were talking about the use</p> <p>5 of the NIST 1866b, and that worked great. And I</p> <p>6 just didn't follow what you were meaning by that.</p> <p>7 A I'm sorry. I'm not understanding the</p> <p>8 question. Could you repeat it?</p> <p>9 Q Yeah. I didn't understand the answer.</p> <p>10 I'm not saying it's your fault. I just didn't</p> <p>11 understand, so I'm trying to wrap my head about</p> <p>12 that.</p> <p>13 We were talking about the early stages</p> <p>14 of analyzing talc for the presence of chrysotile</p> <p>15 using PLM, and you talked about the experience</p> <p>16 early on with the NIST 1866b standard. And what</p> <p>17 I heard some version of -- I'm not saying it was</p> <p>18 your exact testimony but just trying to ring a</p> <p>19 bell here -- that it worked great and there was a</p> <p>20 lot of brownish-blue, but that there -- that was</p> <p>21 a problem. And I wasn't sure what you were</p> <p>22 conveying.</p> <p>23 A For the iodine?</p> <p>24 Q For the iodine, yes.</p>	<p style="text-align: right;">Page 153</p> <p>1 percentages, when you're saying the percentage of</p> <p>2 what you're seeing that didn't match the NIST</p> <p>3 1866b, are you talking about the size of the</p> <p>4 particle?</p> <p>5 A The size of the bundles. Yeah. There</p> <p>6 was -- there was no .1 to 1 percent or 2 percent</p> <p>7 in there. That's -- that was impossible. When I</p> <p>8 saw -- finally saw that data, it was like this is</p> <p>9 wrong. You can't have this much in there. This</p> <p>10 is at trace levels. This is not even close to</p> <p>11 what Colorado School of Mines is finding.</p> <p>12 And, then, I didn't do a deep dive. I</p> <p>13 just looked at it and said, "Why are you doing</p> <p>14 this?"</p> <p>15 "Well, that's the concentrations.</p> <p>16 That's what it looks like."</p> <p>17 No, it doesn't. That's when we started</p> <p>18 really focusing on the -- the -- the Union</p> <p>19 Carbide chrysotile, especially when we started</p> <p>20 seeing that it was giving us very similar</p> <p>21 refractive indices and very similar sizes in</p> <p>22 1.550.</p> <p>23 And then when we found our RG -- our</p> <p>24 SG-210, that was a much better use as a standard</p>

<p style="text-align: right;">Page 154</p> <p>1 than the RG-144 because it was showing the 2 exact -- same ranges of refractive indices, same 3 ranges of length, same ranges of width. So we 4 have -- we had -- we had -- we had it down to the 5 point where it was pretty straightforward. 6 Q So before, though, you started using 7 SG-210, was Paul Hess identifying particles as 8 chrysotile because they matched what he was 9 seeing with NIST 1866b? 10 MS. O'DELL: 11 Object to the form. 12 A No. 1866b has a -- has a different 13 refractive indice [sic] than 1.550 for those big 14 bundles. I mean, you know, the gamma is in the 15 1.550 range to 1.5 -- 1. -- 1.559. I think the 16 highest I've seen is 1.560, the magenta. You've 17 all heard that a few times. It's got to be 18 magenta. 19 But if you look at the bundles of 20 chrysotile that they show in the standards, like 21 the ISO method, the size of those bundles are an 22 entire field of view, maybe four or five hundred 23 microns in length, and their thickness is maybe 24 50 to 100 hundred microns thick. And you get the</p>	<p style="text-align: right;">Page 156</p> <p>1 certain size, it's all the same. So they only go 2 up to a hundred micrometers. 3 So what's the primary difference that 4 we have between what we're seeing in the 1866b 5 standard is how big the structure is. 6 Q So if Paul Hess was not using the 1866b 7 NIST standard to identify what he was seeing in 8 late 2019, 2020 as chrysotile, you had not begun 9 to look, compare yet to SG-210, how was Mr. Hess 10 positively identifying chrysotile during that 11 early period? 12 MS. O'DELL: 13 Object to the form. 14 A Mr. Hess was only using the 1866b as 15 this is how much space it takes up to do the -- 16 the visual estimate for the amount of percent. 17 He was already finding the very small structures. 18 And that's when I stopped him and said you can't 19 use that as your visual estimate, because that 20 has completely different -- not completely 21 different, but the refractive indices on the 22 gamma side are lower, and other min- -- you know, 23 chrysotile minerals we're seeing has a higher 24 gamma, as pointed out by Dr. Su.</p>
<p style="text-align: right;">Page 155</p> <p>1 magenta when you do that, but you also get areas 2 that have the yellowish gold, single little 3 fibrils. But if you look at the size difference 4 between the two, what we're looking at is about a 5 thousand -- 6 You know, and I'm just pulling this out 7 of the air. 8 -- hundreds to maybe a thousandths 9 times smaller than what we're dealing with. 10 Now, I know there's a suggestion that 11 the size of -- the thickness of the bundle makes 12 absolutely no difference, but that doesn't square 13 with the Michelle Levy charts where you determine 14 the birefringence in it on the -- on the, you 15 know, the parallel axis, y axis, as from zero to 16 a hundred micrometers in -- in length. 17 And where you pick off that size, if 18 you go to 10 micrometers off your colors and you 19 say, okay, well, that's -- 20 And they tell you to use the -- the 21 width as the diameter. And you'll have different 22 refractive indices if you've got a 10-micron or a 23 1-micron width versus one that has 50 to 100 24 microns width. Once it gets to a certain level,</p>	<p style="text-align: right;">Page 157</p> <p>1 Q How was -- 2 Withdrawn. 3 What, if anything, was Dr. -- I'm 4 sorry -- Mr. Hess relying on to confirm that what 5 he was looking at in identifying as chrysotile 6 had a correct gamma refractive index? 7 MS. O'DELL: 8 Object to the form. 9 A What was he using? 10 MR. EWALD: 11 Q Yeah. 12 A He was using his experience and 13 knowledge of what the refractive indices, and it 14 didn't match anything else, especially the 15 birefringence. I mean, he's been doing PLM 16 for -- since -- 30, 40 years. And -- and he 17 was -- and he's right. I mean, I was agreeing 18 with him. I made sure that before we -- I put 19 this out there, that we were finding this, that 20 we were following -- and it couldn't be anything 21 else. 22 Q So it's your -- 23 A But I have to say, I mean, we're 24 talking five years ago. I don't remember the</p>

<p style="text-align: right;">Page 158</p> <p>1 whole sequence of events, you know. It's like --</p> <p>2 it's been a lot of work on it over the years.</p> <p>3 But to go from, well, this happened, this</p> <p>4 happened, this happened, this happened, this</p> <p>5 happened, you know, the best way to look at this</p> <p>6 is we go back to when we started -- you know, we</p> <p>7 started analyzing it and putting into the</p> <p>8 notebooks, and you can see there what has changed</p> <p>9 over time.</p> <p>10 Q Well, if I look at the PLM worksheet</p> <p>11 for one of the early analyses, is it going to</p> <p>12 tell me what Mr. Hess used as the basis to</p> <p>13 determine that the gamma refractive index</p> <p>14 corresponded with chrysotile?</p> <p>15 MS. O'DELL:</p> <p>16 Object to the form.</p> <p>17 A No, it's not gonna tell you that. Any</p> <p>18 questions like that, I can tell you.</p> <p>19 You know, we used -- we looked at</p> <p>20 Dr. Su's table for the 1.550, the table 4A and</p> <p>21 4B, and we were in the, you know, the 430 to 450</p> <p>22 range. And there was nothing else it could be</p> <p>23 except chrysotile. It wasn't fibrous talc. It</p> <p>24 wasn't antigorite. It was not lizardite, not</p>	<p style="text-align: right;">Page 160</p> <p>1 Object to the form.</p> <p>2 A I didn't testify at all about</p> <p>3 chrysotile until we had the RG-144 from these</p> <p>4 standards. We knew exactly what we were looking</p> <p>5 for. And we knew that this is what the</p> <p>6 chrysotile was gonna look like, because it was</p> <p>7 matching what we were seeing in the samples.</p> <p>8 MR. EWALD:</p> <p>9 Q How --</p> <p>10 You just told me a couple of questions</p> <p>11 ago that you came up to Mr. Hess after he gave</p> <p>12 you the initial results and you were saying, no,</p> <p>13 no, you shouldn't be using the NIST standard,</p> <p>14 1866b. You should be using this Calidria one.</p> <p>15 Right?</p> <p>16 MS. O'DELL:</p> <p>17 Object to the form.</p> <p>18 A Well, we're talking about two different</p> <p>19 things.</p> <p>20 MR. EWALD:</p> <p>21 Q Okay.</p> <p>22 A I think now I'm more headed to how did</p> <p>23 you -- how did you verify that it was chrysotile?</p> <p>24 Verified it was chrysotile because it was in the</p>
<p style="text-align: right;">Page 159</p> <p>1 sepiolite. It was the only thing it could be.</p> <p>2 And he's a geologist, so, to him, that</p> <p>3 makes sense that you would have that.</p> <p>4 And, then, of course, we started</p> <p>5 looking at --</p> <p>6 Where is that one, the 2022 one?</p> <p>7 MS. O'DELL:</p> <p>8 It's right here.</p> <p>9 MR. EWALD:</p> <p>10 Q Sorry, Doctor. What are you looking</p> <p>11 at?</p> <p>12 A I'm looking at the 2022 one. Those</p> <p>13 analyses for table 2 were done very early on.</p> <p>14 That's how he knew. And this was chrysotile.</p> <p>15 This was all done before we ever put the first --</p> <p>16 on what it should be. And there's no dispute</p> <p>17 that RG-144 is chrysotile.</p> <p>18 Q I thought you just told me that in the</p> <p>19 early days of late 2019, early 2020, when</p> <p>20 Mr. Hess was analyzing some of the talc samples</p> <p>21 by PLM for the presence of chrysotile, that you</p> <p>22 guys hadn't even thought about comparing what</p> <p>23 he'd seen to SG-210 or RG-144.</p> <p>24 MS. O'DELL:</p>	<p style="text-align: right;">Page 161</p> <p>1 ranges that are in the charts.</p> <p>2 And, also, if you look at -- if you</p> <p>3 look at Walter McCrone's -- I think it's 1974, he</p> <p>4 goes through the wavelengths of all the different</p> <p>5 chrysotile mines around the world. I think he</p> <p>6 has 32, 33 of them. There's differences between</p> <p>7 those. And the ones that are the most different</p> <p>8 is from the Coalinga mine, and even ones that are</p> <p>9 even more different -- and I used to have some</p> <p>10 around here, but I don't anymore -- is from the</p> <p>11 Johnson mine in Vermont.</p> <p>12 The standard he -- we made up, he was</p> <p>13 using that for the percentage of chrysotile in</p> <p>14 the sample, not identifying the chrysotile using</p> <p>15 the NIST 1860 -- NIST standard. You can't use</p> <p>16 that to identify what we have here. It has -- he</p> <p>17 doesn't have the right -- unless you do one thing</p> <p>18 to it. Grind it up in liquid nitrogen and get</p> <p>19 the same size as the size we're seeing, and you</p> <p>20 will get very similar refractive indices.</p> <p>21 Q So that goes back to what we talked</p> <p>22 about earlier -- right? -- the -- your theory</p> <p>23 that grinding up in the milling process the talc</p> <p>24 and, presumably, as you are contending,</p>

<p style="text-align: right;">Page 162</p> <p>1 chrysotile, changes the refractive indices. 2 Fair? 3 MS. O'DELL: 4 Object to the form. 5 A I'm not sure what you said. What we 6 took was is the 1866b standard and purchased a 7 liquid nitrogen stainless steel state-of-the-art 8 mill. You have to keep it frozen in liquid 9 nitrogen because it has too much flexibility, 10 unlike tremolite and anthophyllite. So you have 11 to keep it, make it brittle, which the liquid 12 nitrogen does. 13 And, then, once I got it down to a size 14 I thought was appropriate, I ran it through a 15 sieve and took the minus 200 in the sieve and 16 then had them analyze it, and the refractive 17 indices are just about -- you know, they're 18 different. They're not -- they're not your 19 usual, you know, magenta. You know, we've got 20 some sizes that we get very similar stuff that 21 we'd seen before. A lot of it was around the 22 1.562. 23 MR. EWALD: 24 Q Apart from your liquid nitrogen</p>	<p style="text-align: right;">Page 164</p> <p>1 MS. O'DELL: 2 Object to the form. 3 A If you go to our supplement expert 4 report, October 9th, 2023, and you go to section 5 7 -- 6 MR. EWALD: 7 Q I'm sorry, Doctor. What are you 8 looking at? 9 A Supplement expert report, October 19th, 10 2023, comparison by our chrysotile structure 11 size, Union Carbide's SG-210 product with 12 Coalinga mine, California, Montana, blah, blah, 13 blah, and reduced-size NIST 1866b chrysotile 14 standard, which is the very last section. And 15 I'm gonna tell you what page it's on. 16 Here we go. Got to get down to it, 17 1.550. 18 You want to go to page -- 19 Let me get to the post 1.550. 20 Okay. You go to page 175. Best 21 example is on page 195, because this was our 22 first attempt at this, where our perpendicular -- 23 excuse me -- parallel is 1.563, and there's no 24 magenta, the pinkish-purple -- pinkish-red, and</p>
<p style="text-align: right;">Page 163</p> <p>1 experiment, do you have any support for the 2 proposition that grinding chrysotile changes its 3 refractive index? 4 MS. O'DELL: 5 Object to the form. 6 A Getting it down to a size that is way 7 different than what's in there, it does change 8 the refractive index, because it changes the 9 birefringence, because we have a chart that shows 10 that. And you can't change the birefringence 11 unless you're changing the refractive indices. 12 MR. EWALD: 13 Q So when you talked about grinding it to 14 a size smaller than what we see -- 15 I just wasn't sure what you were 16 referring to. What size are you grinding it to? 17 A A minus 200 sieve size, cosmetic talc 18 size. 19 Q And I don't think you answered my 20 question as to, leaving aside the liquid nitrogen 21 experiment that you just discussed, do you have 22 any support for the proposition that milling and 23 grinding a chrysotile particle will change its 24 refractive index?</p>	<p style="text-align: right;">Page 165</p> <p>1 we have a lot of 1.563s in the SG-210 as well 2 as -- as well as in the products themselves. 3 Now, the parallel -- excuse me. The 4 perpendicular were never really that far out of 5 line. That doesn't change that much. 6 Q Do you have a working theory on why the 7 milling and grinding of chrysotile will alter the 8 gamma refractive index but not the alpha? 9 A I don't have a working theory on it, 10 but it is consistent with what Dr. Su said in his 11 paper, that he said you will have significantly 12 higher gammas than the 1866b. He didn't say 13 anything at all about having significantly higher 14 perpendiculars. I just don't -- you know, that 15 seems to be not affected by the -- by the 16 diameter of the bundle. 17 Q Has anyone other than Paul Hess 18 conducted PLM chrysotile analysis on J&J talc -- 19 MS. O'DELL: 20 Object to the form. 21 MR. EWALD: 22 Q -- for MAS? 23 A We have. We have three -- we had three 24 people that was doing that at the time, but</p>

<p style="text-align: right;">Page 166</p> <p>1 mostly just the QC end of it. That would be 2 Chris DuBour. And that was about it. 3 Q Okay. So what I heard from you is that 4 Chris DuBour and one other person helped on the 5 QC, but that Paul Hess was the analyst making the 6 decisions? 7 MS. O'DELL: 8 Object to the form. 9 A He was -- if you look on the reports, 10 his name's the only name on there. 11 MR. EWALD: 12 Q Right. So you would agree with me that 13 Chris DuBour and the unnamed third person -- 14 A I think Chris DuBour, he may have a 15 project somewhere that's got his name on it. I 16 just -- you know, I'd have to go look. 17 Q Okay. I've heard some differing things 18 about Mr. Hess's current status at MAS. What is 19 his current employment status? 20 A He's now working part-time again for us 21 instead of just a consultant. 22 Q When did he go back to working 23 part-time? 24 A I don't remember the exact time. But</p>	<p style="text-align: right;">Page 168</p> <p>1 MAS at this point in time? 2 A Me, Paul Hess, and we have some 3 trainees coming along. 4 Q Why? There are trainees coming along? 5 They're not ready at this point in time? 6 A Well, they have to get really where I'm 7 comfortable that what they're doing is correct. 8 We invest a lot of time in training them. 9 Q And you're not, at this point, 10 comfortable that they know how to do the right 11 thing? 12 MS. O'DELL: 13 Object to the form. 14 A They're early in their training 15 program. It's not comfortable or uncomfortable. 16 You know, if I had a Ferrari and I wanted them to 17 race a track, no. Would I put them in it now? 18 No. But I don't have a Ferrari. I'm not even 19 sure why I used that analogy. 20 MS. O'DELL: 21 Me either. 22 A Must be getting tired. What time is 23 it? 4:19. 24 MS. O'DELL:</p>
<p style="text-align: right;">Page 167</p> <p>1 he's -- 2 Q Was it last year? 3 A Huh? 4 Q Was it last year or this year? 5 A I think it was this year. 6 Q What period of time was he working as a 7 consultant? 8 A I don't recall. 9 Q Do you currently intend to analyze any 10 additional samples of J&J talc by PLM for the 11 presence of chrysotile? 12 MS. O'DELL: 13 Object to the form. 14 A I mean, it's hard for me to say I'm not 15 going to analyze anything more. We're always 16 doing research. If we do any more, I'll 17 certainly let my client know so they can let you 18 know. 19 MR. EWALD: 20 Q Understood. 21 And if -- if MAS, whether it's with J&J 22 or another cosmetic talc manufacturer, if MAS is 23 going to do any PLM analyses for the presence of 24 chrysotile, is -- who is qualified to do that at</p>	<p style="text-align: right;">Page 169</p> <p>1 4:20. 2 A Cut off at 5:00. 3 MR. EWALD: 4 Q Okay. I -- 5 Well, I think -- 6 I'm just cognizant of others and the 7 court reporter. I can't remember when we went 8 back on the record. We've been going for more 9 than an hour. Do you want to take a quick break 10 before and then finish up at 5, or do you want to 11 plow through? I'm happy to do either. 12 A Let's stop now? I'm not sure what you 13 said. 14 MS. O'DELL: 15 You want a 5-minute break and then 16 finish at 5:00, or -- 17 MR. EWALD: 18 Yeah. I'm happy to push through. I 19 think we've been going for over an hour. I just 20 want to make sure that anybody else doesn't want 21 to take, like, a quick two-, three-minute break. 22 That's all I'm saying. 23 A Yeah. That's a good idea. 24 VIDEOGRAPHER:</p>

<p style="text-align: right;">Page 170</p> <p>1 Off record. The time is 4:20. 2 (OFF THE RECORD.) 3 VIDEOGRAPHER: 4 Back on record. Time is 4:27. 5 MR. EWALD: 6 Q Doctor, I saw in a recent deposition of 7 yours that you were discussing results of testing 8 by Mark Bailey involving TEM and CSM method. Do 9 you know what I'm talking about? 10 A I do. 11 Q So tell me what you know about that 12 testing by Mark Bailey. 13 A Alls he's doing is TEM, and he's doing 14 CSM on every sample for both amphiboles and 15 chrysotile. And the data I heard about, that 16 he's -- he's finding about 75 percent positive 17 for chrysotile using CSM. 18 Q Where did you hear about it? 19 A From him. 20 Q Okay. 21 A Satterley and them. It's not J&J. And 22 I will not name who it is. But I think he's 23 taking our work and -- 24 Well, not sure. So --</p>	<p style="text-align: right;">Page 172</p> <p>1 results have been made public? 2 A I think they have been made public in 3 non-J&J cosmetic talc project -- I mean 4 litigation. 5 Q Okay. 6 A So -- but I thought you guys all talk 7 to each other. 8 Q I know. Like I said, I've gotten out 9 of the game; right? So I guess no one told me. 10 So I want to talk a little bit about 11 lab accreditations. And am I correct that MAS at 12 current is not accredited by NVLAP? 13 A We dropped out of the NVLAP program, 14 and we went in -- we joined the A2LA program that 15 is -- follows ISO methods for accreditation 16 because we have so many that we do through A2LA 17 that's not provided by others. And I know people 18 have a problem with this, but we were recommended 19 by our last auditor that we drop the program 20 because we were wasting our money. 21 Now, we still do the same PLM PAT 22 rounds. We also do TEM PAT rounds as -- 23 But A2LA -- excuse me -- NVLAP, when 24 the auditor comes in, they're only interested in</p>
<p style="text-align: right;">Page 171</p> <p>1 Q You at least -- 2 A He's not focused on PLM. He's focused 3 on TEM. 4 Q Can you confirm that, based on what you 5 just said, that whatever testing he's done of 6 samples are not J&J samples? 7 A I've not heard he's done J&J samples. 8 Q Have you seen any images or data from 9 his testing of the -- using TEM and CSM method? 10 A I was shown it, but I was not given the 11 data. 12 Q Are you planning to rely on those 13 findings to support the conclusions that you are 14 offering in this MDL? 15 A Well, I would caution you, don't say 16 that nobody else in the world is doing -- finding 17 chrysotile in cosmetic talc samples using a CSM 18 method. 19 Q I didn't say that, did I? I haven't 20 said that. 21 A You used to say that. 22 Q I don't know if I did. 23 Okay. Is -- I guess you have an 24 understanding as to whether or not these test</p>	<p style="text-align: right;">Page 173</p> <p>1 looking at reports that have to do with schools, 2 PLM samples of schools, air sample analysis of 3 schools. And our 1990 ad didn't work very well 4 because we don't get any more samples from 5 schools, or attorneys, from that. 6 So he said that we were wasting our 7 money and we ought to do this. So we dropped it. 8 But we're still doing the exact same thing we 9 were doing before on the PAT rounds. 10 Q What I saw on your website is as it 11 relates to asbestos in cosmetic talc products by 12 TEM certified for ISO 22262-1 and 22262-2. Is 13 that correct? 14 A That is correct. We have that 15 certification from A2LA or ISO. And we get 16 audited every year. As far as I know, we're the 17 only laboratory in the country that actually has 18 been certified to analyze, by both PLM and TEM, 19 for amphibole asbestos in talc. 20 Q All right. And you are not certified 21 by A2LA or ISO for analyzing talc products for 22 the presence of chrysotile; correct? 23 A We have not applied for that yet. 24 Q Do you have plans to apply for it?</p>

<p style="text-align: right;">Page 174</p> <p>1 A Well, of course, some day.</p> <p>2 Q When you talked about being --</p> <p>3 Well, let me first ask. For --</p> <p>4 And I'm understanding for NVLAP. But</p> <p>5 for A2LA, what goes into the initial</p> <p>6 certification process that we see here, for</p> <p>7 example, the two ISO 22262 methods?</p> <p>8 A Those are confidential business</p> <p>9 records, so we won't discuss that.</p> <p>10 Q Okay. Let's be clear on what, if</p> <p>11 anything, you're willing to discuss.</p> <p>12 Are you testifying that you are not</p> <p>13 going to tell me what steps MAS had to take to</p> <p>14 satisfy A2LA that they should be certified under</p> <p>15 the different methods?</p> <p>16 MS. O'DELL:</p> <p>17 Object to the form.</p> <p>18 A No, I'm not gonna discuss it. I mean,</p> <p>19 we have quite a few A2LA certifications. So</p> <p>20 that's not really offered by other people, such</p> <p>21 as, you know --</p> <p>22 And as soon as I start talking about</p> <p>23 what we supply to them, you'll start putting it</p> <p>24 in your subpoenas.</p>	<p style="text-align: right;">Page 176</p> <p>1 outgassing of volatile organic compounds, VOCs.</p> <p>2 There's three or four labs that do it in the</p> <p>3 country. There's only one of us that are</p> <p>4 certified to do it. Because we put up standards,</p> <p>5 put it into the chambers to mimic what comes out</p> <p>6 of things like rugs and, you know, tables that</p> <p>7 have, you know, a surface on it that is emitting</p> <p>8 VOCs or car parts, that nice new car smell that</p> <p>9 we all love. You know, that's volatile organic</p> <p>10 compounds.</p> <p>11 So we would introduce that into the</p> <p>12 chambers, measure them to show that, you know, we</p> <p>13 can replicate it.</p> <p>14 There is no -- you know, you can't go</p> <p>15 to AIJ for that. You can't go to any -- any --</p> <p>16 any type of group that says, okay, here's for VOC</p> <p>17 testing. This is what you have to do.</p> <p>18 So we come up with the protocol in what</p> <p>19 we're doing and then prove that we can replicate</p> <p>20 that work, and then they give you the</p> <p>21 certification, and they come in once a year and</p> <p>22 look over everything.</p> <p>23 Q Are you willing to testify about what</p> <p>24 goes into the yearly audit of -- by A2LA?</p>
<p style="text-align: right;">Page 175</p> <p>1 MR. EWALD:</p> <p>2 Q Well --</p> <p>3 A It's business records, and it's</p> <p>4 confidential, you know. It's same thing about</p> <p>5 SOPs. They see an SO- --</p> <p>6 We may -- you know, hypothetically,</p> <p>7 they'll be looking at an SOP. Then they come in</p> <p>8 and audit and they look and see what we're doing</p> <p>9 and they look at analysis. They do what NVLAP</p> <p>10 do.</p> <p>11 Q And the PAT --</p> <p>12 Sorry. Go ahead.</p> <p>13 MS. O'DELL:</p> <p>14 Sorry. I don't think he's finished.</p> <p>15 A Yeah. Except here, they're not just</p> <p>16 interested in schools. They're interested in</p> <p>17 what -- what we're actually accredited for, so --</p> <p>18 And it's really -- it's really good</p> <p>19 because not every analysis that you do, there is</p> <p>20 a standard accreditation for it.</p> <p>21 Q I'm sorry. I didn't follow that last</p> <p>22 point. You're saying that it's --</p> <p>23 A Well, for example, we do a lot of -- we</p> <p>24 do a lot of chamber work where we're measuring</p>	<p style="text-align: right;">Page 177</p> <p>1 A They have checked your analysis. They</p> <p>2 check controls, et cetera, et cetera. They want</p> <p>3 to look at the equipment. They want to look at</p> <p>4 the analysis. They want to look at reports.</p> <p>5 Q So when they -- somebody comes from --</p> <p>6 Was it one person that comes from A2LA</p> <p>7 or more than one person?</p> <p>8 A Just one.</p> <p>9 Q And what sort of training does the</p> <p>10 person from A2LA have, to your understanding?</p> <p>11 A Oh, they've either been doing this for</p> <p>12 a while or, you know, it's --</p> <p>13 They typically don't give their résumés</p> <p>14 out; just give their titles and what they've</p> <p>15 been, you know, kind of doing. I've never run</p> <p>16 across one that didn't know what they were doing.</p> <p>17 Q So this A2LA representative shows up.</p> <p>18 Say that they check your analyses. What does</p> <p>19 that mean, "check your analyses"?</p> <p>20 A They want to see that you're doing what</p> <p>21 you said you were gonna be doing.</p> <p>22 Q And how do they do that?</p> <p>23 A Well, they look at the analysis. They</p> <p>24 look at your SOPs. They look at the equipment.</p>

<p style="text-align: right;">Page 178</p> <p>1 They look at reports that you've generated where 2 you've either not found something or found 3 something. They want to look at the process 4 blanks that we say that we do on every batch of 5 TEM samples. They want to see, you know, how 6 we're determining and not contaminating samples. 7 You know, every quarter we do air samples in all 8 the areas where we handle asbestos; whether it's 9 working properly, whether they have the 10 appropriate airflow into them. You know, it's 11 just whatever -- 12 It's really not a set schedule of what 13 they're looking at. Do we calibrate the 14 balances? Did we do this? Did we do that? 15 Fortunately, I don't have to deal with them too 16 much. 17 Q So you said they look at reports. That 18 includes litigation reports? 19 A Excuse me? 20 Q So they look at reports. Does that 21 include litigation reports? 22 A Um, well, we show them the analysis of 23 a litigation report, not the -- they don't read 24 the reports. I would never do that. But we've</p>	<p style="text-align: right;">Page 180</p> <p>1 Object to the form. 2 A I'm preventing you or your client to 3 get double the confidential business records that 4 people would love to have because it would save 5 them a lot of time and effort to get these 6 certifications. 7 You know, it's the same thing with 8 NVLAP. I wouldn't give those up either until you 9 guys did a -- J&J did a FOIA on it. And I wasn't 10 going to provide any information about our audit 11 with FDA. So, you know, I look at that as all 12 confidential business records. 13 MR. EWALD: 14 Q From -- 15 For all of the -- for all of the PLM 16 chrysotile tests that are included in the fourth 17 supplemental MDL report dated April 29th, 2024, 18 how much money has MAS been paid by plaintiffs' 19 lawyers? 20 A From when to when? 21 Q For all of the testing of the M- -- 22 Withdrawn. 23 From when to when is all of the tests 24 included in the fourth supplemental MDL report</p>
<p style="text-align: right;">Page 179</p> <p>1 got to show them examples of the analysis we're 2 doing. 3 But most everything else is not -- you 4 know, everything else besides what we're doing 5 for the Blount -- the Blount and the TEM, it's 6 nonlitigation that we have these other 7 certifications for. 8 Q Have you or anyone at MAS, to your 9 knowledge, asked A2LA about what it would take to 10 get certified for the PLM chrysotile method? 11 A No. Not that I'm aware. 12 Q In -- 13 Since MAS has obtained these A2LA 14 talc-related certifications, you have testified 15 on direct at various trials highlighting the 16 accreditations; correct? 17 A Absolutely. We're proud of it. And I 18 think we're the only ones in the country still 19 that has that certification on both plaintiff's 20 and defense side. 21 Q But yet you are preventing me and my 22 client from finding out anything that went into 23 obtaining those certifications. 24 MS. O'DELL:</p>	<p style="text-align: right;">Page 181</p> <p>1 dated April 29th, 2024, that are the PLM 2 chrysotile tests? 3 A I would consider that confidential. 4 Q On what basis? 5 A The basis is is that our -- we look at 6 it as confidential unless we can come to an 7 agreement, like the last time, that these 8 invoices were produced from both sides, you know, 9 your experts, our experts, and we can redact what 10 we did. 11 And I recall that the amount MAS 12 invoices for -- I think this is 2016, 2017, 2018 13 or so -- it's like 2.9 million, and RJ Lee was 14 like 5-point-something million, 5.6 million. 15 But, you know, I thought that was 16 pretty fair, that, okay, get the experts in. We 17 have to produce, you know, who we'd done the work 18 for, and we were able to redact. So this was, 19 you know, quid pro quo. It seems like only -- 20 So I always consider that confidential. 21 Q Unless there's a quid pro quo. 22 A No. I still think it ought to be 23 confidential. But certainly, you know, when the 24 judges get together and they come up with</p>

<p style="text-align: right;">Page 182</p> <p>1 something that they deem is fair for both sides.</p> <p>2 Q So it's, in your nonlegal opinion, it</p> <p>3 should be confidential about the amount of money</p> <p>4 you have been paid by plaintiffs' lawyers to</p> <p>5 conduct the studies that you are relying on in</p> <p>6 your fourth supplemental MDL report for your</p> <p>7 expert opinions in this case?</p> <p>8 MS. O'DELL:</p> <p>9 Object to the form.</p> <p>10 A I'm not an attorney.</p> <p>11 MS. O'DELL:</p> <p>12 Yeah. Please don't give a legal</p> <p>13 opinion.</p> <p>14 MR. EWALD:</p> <p>15 Q I was very clear. I asked not from a</p> <p>16 legal perspective.</p> <p>17 MS. O'DELL:</p> <p>18 Well --</p> <p>19 MR. EWALD:</p> <p>20 Hold on. Hold on. You're the one --</p> <p>21 Leigh, hold on. Hold on.</p> <p>22 MS. O'DELL:</p> <p>23 I'm not --</p> <p>24 MR. EWALD:</p>	<p style="text-align: right;">Page 184</p> <p>1 studies that are contained in Dr. Longo's fourth</p> <p>2 supplemental MDL report dated April 29th, 2024,</p> <p>3 and specifically outlined on tables 1, 2, 3, 4,</p> <p>4 5, 6, and 7 at the back of the report?</p> <p>5 MS. O'DELL:</p> <p>6 Same objection.</p> <p>7 MR. EWALD:</p> <p>8 Q But you understand what I'm asking for?</p> <p>9 A I understand. And I would just be</p> <p>10 speculating. I have no idea on what the amounts</p> <p>11 would be for all -- for the different plaintiffs</p> <p>12 that we've done work for. I'm just -- you know,</p> <p>13 on the chrysotile.</p> <p>14 Q Okay. I'm about to start something</p> <p>15 new. We can stop ten minutes early if you want.</p> <p>16 MS. O'DELL:</p> <p>17 Okay. Let's do it. Let's, you know,</p> <p>18 let's go off the record and stop for the day, and</p> <p>19 then we'll pick it up.</p> <p>20 VIDEOGRAPHER:</p> <p>21 Okay. Should we go off record?</p> <p>22 MR. EWALD:</p> <p>23 Yes.</p> <p>24 MS. O'DELL:</p>
<p style="text-align: right;">Page 183</p> <p>1 There's not a question pending.</p> <p>2 Leigh -- Leigh --</p> <p>3 MS. O'DELL:</p> <p>4 You do not have a question pending.</p> <p>5 I'm objecting and saying he's provided that</p> <p>6 there's been information provided about what he's</p> <p>7 paid -- been paid in relation to his MDL work. I</p> <p>8 just want to make that clear. And we provided</p> <p>9 those invoices, and he testified to it earlier.</p> <p>10 So to the degree you're asking</p> <p>11 something else, you need to make it clear. And I</p> <p>12 just want to make sure the record is -- is clear</p> <p>13 as well that we've provided what we feel is</p> <p>14 appropriate under the MDL order.</p> <p>15 MR. EWALD:</p> <p>16 And I'm happy -- I don't always ask the</p> <p>17 best questions, but I feel like my question was</p> <p>18 pretty clear, which is how much money has Dr. --</p> <p>19 Sorry. Withdrawn.</p> <p>20 How much money has AMA --</p> <p>21 See, now you've got me all flustered,</p> <p>22 Leigh.</p> <p>23 How much money has MAS been paid by</p> <p>24 plaintiffs' lawyers for the PLM chrysotile</p>	<p style="text-align: right;">Page 185</p> <p>1 Thank you, John.</p> <p>2 VIDEOGRAPHER:</p> <p>3 Going off record. Time is 4:48.</p> <p>4 (Deposition adjourned at 4:48 p.m.)</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p>

Page 186

1 C E R T I F I C A T E

2
3 I do hereby certify that the above and
4 foregoing transcript of proceedings in the matter
5 aforementioned was taken down by me in machine
6 shorthand, and the questions and answers thereto
7 were reduced to writing under my personal
8 supervision, and that the foregoing represents a
9 true and correct transcript of the proceedings
10 given by said witness upon said hearing.

11 I further certify that I am neither of
12 counsel nor of kin to the parties to the action,
13 nor am I in anywise interested in the result of
14 said cause.

15
16
17

18 *Lois Anne Robinson*
19 /s: // Lois Anne Robinson

20 LOIS ANNE ROBINSON, RPR, RMR
21 REGISTERED DIPLOMATE REPORTER
22 CERTIFIED REALTIME REPORTER
23
24

48 (Page 186)

[& - 15]

Page 1

&	26:6,15 29:14	1.560 34:18	85:10 134:13
& 1:6 2:3,7,10	29:19 30:1,4	35:8,22 36:3,23	141:5 155:18
2:14,18 12:20	37:13 39:18	37:13 39:13,15	155:22
46:11,13 51:12	45:6 63:1 64:8	42:11,13 96:12	10,000 90:20
52:6,21 57:1	64:16 66:6,15	154:16	100 154:24
82:23 83:15,22	68:17 69:20,21	1.560. 35:24	155:23
83:24 84:4 85:3	70:9,10 71:7,19	36:24 118:24	10036 2:19
91:9,11 118:6	72:8 81:21	119:5	10th 103:17
127:7 147:20	85:17 115:1	1.561 39:14	10x 92:11
	153:6,6 154:15	1.562. 162:22	11 4:8 44:8
0	155:23 184:3	1.563 23:5,5	58:15
0.00001 102:10	1.4 66:10	164:23	11-17-23 11:18
0.0001 149:15	1.5 12:17 22:17	1.563s 165:1	11:21
0.0001. 73:13	22:23 36:22	1.565 37:17,21	11-28-2023
0.001 9:1	154:15	38:12,20,24	95:15
000 71:15	1.527 22:21	1.565. 36:1	1185 2:18
0001 8:10,15	1.545 42:4	38:22 39:8	11:20 1:17 5:6
73:11 85:10	1.545. 41:17	1.567 22:3,21	12 4:10 22:21
001 100:10	1.55 35:8 38:2	1.569 35:22	144:16,19,20
003 100:13	1.550 9:12,13	36:18 39:14,14	145:1
005 100:10	10:4 23:15	1.569. 36:24	127 2:10
01 64:9,16	24:15 34:18	1.570 36:21	12:30 53:7
69:11 70:13	35:9 42:11,13	1.571. 36:21	12:31 54:8
02 75:19	69:4,5 72:2	1.582 23:5	12:41 54:11
03 55:17 75:19	154:13,15	1.585 23:20	12th 55:24
03-12-2020	158:20	1.585. 22:3,15	13 73:9
55:17	1.550. 20:9 38:1	22:22	144 7:24 8:6,9
07701 2:11	42:5 153:22	1.60 38:1	67:14,17,24
08002 2:15	164:17,19	1.615. 23:8	68:2 152:20
1	1.555 35:8	1.645. 23:6	154:1 159:17
1 3:7 8:10,15	1.558. 36:22	1.67. 22:11	159:23 160:3
11:1 13:17	1.559 36:22	1.70 35:22	145 4:10
14:10 17:7,10	1.559. 154:15	1.8576. 22:24	14th 13:16
17:14 18:19	1.56 24:19 36:2	10 4:6 14:19	15 53:8 90:23
20:3,24 22:1,2	36:18	22:16 57:21	141:8
		58:2 65:19	

[150 - 210]

Page 2

150 108:9	1990 46:8 173:3	2.9 181:13	102:22 104:16
16 105:22	1991 60:5 65:5	2/1/19 4:9	105:4,6,12
16-2738 1:5	1995 65:5	2/4/20 4:11	106:21 108:14
17 3:7,9	19th 164:9	20 44:7 53:17	126:22 131:13
175 108:9	1:39 93:20	93:10,16	131:18 141:21
164:20	1st 11:24 58:14	103:17 134:14	143:23 144:21
1800 148:14	58:21 59:13	200 76:2 146:12	152:11 156:8
1825 2:7	79:12,18 82:7	162:15 163:17	159:19
1860 161:15	2	2000 12:2	2021 18:9,18,20
1866 35:6 42:16	2 1:16 3:9 8:6,9	20006 2:8	19:1 20:6 57:7
1866b 10:13	8:23 13:24 17:9	2000s 46:9	2022 8:3 9:16
33:7,14 98:6,24	17:10 26:5,15	2002 46:9	9:19 13:24
146:19 151:5	26:18 27:9 29:6	2003 46:9	30:17 31:4
151:16 152:4	29:15,20 30:5	2004 80:22	40:13 68:15
152:13,14	81:21 119:15	2010 32:3	70:20 71:3
153:3 154:9,12	136:24 146:13	2010-07-11	127:10 159:6
156:4,6,14	146:24 147:23	10:22	159:12
160:14 162:6	153:6 159:13	2016 181:12	2023 10:14
164:13 165:12	184:3	2017 181:12	65:24 70:1 96:9
18th 87:11	2-15-2024	2018 12:22 13:1	130:23 164:4
19 30:20 46:8	130:21 147:22	15:5 80:24,24	164:10
152:11	2-9-2021 15:4	81:2 181:12	2024 1:16 5:5
1918 30:20,20	2.65 102:18	2019 11:24	7:6 11:13 57:17
195 164:21	2.65. 96:10	15:11 58:14,22	57:23 84:18
1960 12:2 46:8	148:4 150:22	59:13 79:12,18	97:2 131:2
1970 46:8	2.7. 92:22	80:24 82:7	180:17 181:1
1973 84:24	2.72 148:1,10	103:17 108:15	184:2
86:17 87:8	2.72. 78:8 148:2	108:19,23	2067 186:17
106:14	2.72g 147:17	109:14 112:19	21 148:17
1974 90:7	2.75 96:16	131:22 152:11	210 7:24 10:10
147:24 148:19	2.76 92:21	156:8 159:19	36:11 39:20
161:3	96:17	2020 13:17	50:15 65:22
1975 87:11	2.78. 96:17	14:11 15:16	66:15 68:10,14
1980 46:8	2.85 96:14	18:9,19 19:1	70:10 71:14
1980s 30:21		20:6 55:24 67:5	73:12,15 74:8
		67:10 97:19	99:12 101:6

[210 - 76]

Page 3

153:24 154:7 156:9 159:23 164:11 165:1 218 2:3 22 140:14 22262 174:7 22262-1 10:23 136:24 173:12 22262-2 96:13 105:21 140:6 173:12 228 12:8 23rd 13:23 57:7 87:8 27th 84:24 28 130:23 29th 11:13 57:17 84:12,18 86:16 131:2 180:17 181:1 184:2 2:19 93:23 2:42 107:10 2nd 5:5 7:6 8:3 57:23	30 53:18 93:10 93:16 157:16 31 3:11,15 47:1 310 2:14 32 161:6 33 161:6 34th 2:19 36103 2:4 3:12 130:6 3:24 130:9	4:48 185:3,4 4a 32:8 158:20 4b 32:8 158:21 4th 97:17,19 102:22 104:16 105:3,5,11 106:20 126:22 141:21 144:21	6 6 3:3,21 22:16 22:23,23 41:13 43:3,9,13 47:2 66:4 85:14 90:23 184:4 60s 132:18 63 23:19 41:23 64 41:12 42:1 65 15:12 113:17 147:23 69 9:16,18,19 69-2 9:19 6th 15:11
	4	5	7
	4 3:15 8:23 22:23 31:15,19 32:19,23 33:1 34:10 39:24 40:1,8 66:14 69:20 70:8,9 108:13 143:23 184:3 4.60 40:22 4/29/24 4:5 40 157:16 400x 92:12 42 3:19 43 3:21 80:3,19 430 158:21 44 99:13 450 158:21 46 82:2 480 40:23 4:19 168:23 4:20 169:1 170:1 4:27 170:4	5 3:19 7:7 10:3 20:4 22:21,23 23:6 39:13 42:19,23,24 66:16 68:4 90:23 141:8 148:13,14 169:10,15 181:14 184:4 5.6 181:14 5/2/24 4:7 50 46:10 112:5 112:8 154:24 155:23 50,000 108:3,6 500 148:13 51 9:19 33:22 54 41:19 56 3:23 34:15 39:10 57 4:2,4 40:11 40:20 58 4:6,8 5:00 169:2,16	7 3:23 22:16,21 22:23 55:22 56:1 87:5 102:10 141:5 164:5 184:4 7.2 102:16 70 68:7 700 2:7 70024 90:14 70042 90:14 70s 90:8 132:18 71 91:5 72 91:6 100:24 101:8 148:16 73 99:5 74 91:5 75 91:5 110:6 113:17 170:16 76 110:7
3			
3 2:14 3:11 22:23 23:6 31:3 31:8 33:2,3 34:10 39:11 40:12 41:12,21 42:1 63:21 81:21 84:18,20 184:3			

[8 - alan]

Page 4

8	able 9:10 75:10 78:17 92:15 118:7 124:10 137:13 181:18 above 39:15 186:3 absolutely 106:4 113:1 121:9 122:2 144:4 155:12 179:17 absorb 98:12 147:1 152:4 abstract 103:4 accepted 56:7 56:17,22 139:13 accompanied 144:21 accreditation 172:15 175:20 accreditations 172:11 179:16 accredited 172:12 175:17 accuracy 34:19 37:12 42:8 accurate 37:16 accurately 3:16 10:19 31:16 33:15 accused 21:11 25:11 accusing 56:13 actinolite 85:5 149:3	action 186:12 actions 83:21 actual 32:23 139:20 141:16 actually 20:16 25:19 28:10,11 29:21 30:16 33:17,18 44:2 47:23 49:15 52:10,14 81:23 98:13 123:7 132:2 150:17 173:17 175:17 ad 173:3 adam 37:5 add 32:19 45:6 45:10 81:24 added 50:8 63:20 117:9 additional 46:12 47:21 59:4 94:7 117:11 167:10 address 93:8 addressed 79:12 adjourned 185:4 adjust 119:5 advanced 16:9 86:18 advancement 16:9 82:13 92:1 92:6 115:5 125:9	advancements 92:3 adxa 46:22 affect 76:17,20 78:19 affected 165:15 aforementioned 186:5 agency 21:1 ago 16:8 82:14 134:14 157:24 160:11 agree 45:2 122:19 123:7 124:17,23,24 126:19 137:14 166:12 agreed 5:11 122:22 agreeing 157:17 agreement 59:18 181:7 agrees 123:2,6 ahead 17:7 39:7 43:12 104:7 116:10 136:20 144:14 175:12 ahera 21:4 aij 176:15 air 67:15 155:7 173:2 178:7 airflow 178:10 alabama 2:4 alan 49:8 128:11 129:3
8 4:2 22:23 57:1 57:3 66:6 90:20 80 22:22 68:7 77:19 78:3 112:6,10 113:17 82 23:5,19			
9			
9 4:4 22:23 57:15,18 58:6 65:24 66:9 79:22 80:11,13 94:9 9,000 90:20 9-16-2022 14:4 90 77:18 78:3 112:6,10 90s 30:21 93 11:2 9th 10:14 70:1 164:4			
a			
a.m. 1:17 5:6 a2la 172:14,16 172:23 173:15 173:21 174:5 174:14,19 176:24 177:6 177:10,17 179:9,13 abandon 19:13 ability 78:19 112:16 147:2			

[alcohol - anyway]

Page 5

alcohol 146:14	79:17 92:20	102:14 107:18	151:14 158:7
alice 60:5 63:9	99:2 103:15	112:1 118:1	159:20 173:21
117:14	111:4 114:15	140:21 145:6	anne 1:17 2:23
allen 2:3	116:20 117:9	145:20 146:1,6	186:18,18
allowed 90:19	136:11,21	146:16 148:15	answer 17:2
alls 38:4 134:15	140:19 142:3	148:19 150:16	20:3 104:4
170:13	142:17,18	151:3 165:18	133:24 134:15
alpha 165:8	149:1 170:14	173:2 175:9,19	134:16 151:9
alphadet 46:14	analogy 168:19	177:1,4,23	answered 78:2
alter 165:7	analyses 58:21	178:22 179:1	93:11 163:19
ama 81:5	130:24 131:1,4	analyst 40:21	answers 186:6
128:12,15	158:11 159:13	41:1 65:8 67:5	anthophyllite
129:1 183:20	167:23 177:18	67:10 99:17,24	149:4 162:10
america 127:10	177:19	125:16 152:21	antigorite 3:10
americas 2:18	analysis 3:14	166:5	9:12 16:17 17:9
amount 100:13	4:12 7:22 8:1,8	analysts 64:7	17:19 18:2 19:4
133:3 139:19	9:23 11:17,22	analytical 6:13	19:17 20:12,14
156:16 181:11	12:8,12,17,19	112:9 132:16	20:24 21:4,14
182:3	12:21 13:21	132:19 137:10	21:16 22:7 24:4
amounts 62:24	14:1,3,12,19	138:18	25:1,8,18 26:7
85:18,18	15:4,17,24 16:7	analyze 109:4	26:9,11 27:10
110:16 184:10	21:8 25:6 27:14	109:24 126:23	27:23 28:10,11
amphibole 4:12	31:7 34:1,21	126:24 137:4	29:7,15,20 30:3
12:20 13:3 16:4	36:17 40:10	162:16 167:9	30:4 158:24
59:12 63:10	41:14 47:15,23	167:15 173:18	anybody 6:21
73:18 79:12	48:14 59:18,23	analyzed 12:14	47:16 48:14
82:15,21,24	60:17,18 64:19	64:1 67:10,12	105:21 123:20
85:9 91:14	64:20 65:3,8	82:3 110:5,12	127:1 128:9
96:12 103:8,21	66:17 68:13	119:9,15,16,16	129:9 132:3
105:4 117:16	70:15 74:7	119:17 121:16	169:20
140:1,5,9,14	79:13,16 80:3	analyzing 24:2	anymore
145:6,21 146:1	80:15,19 81:4	51:10 62:12	129:15,18
173:19	82:14,15 83:7	63:18 73:2	149:10 161:10
amphiboles	83:11,20 91:13	78:23 79:2,5	anyway 23:13
13:7 59:2,19,24	92:2 93:1 94:4	111:13 116:19	63:14 67:20
60:4,13 76:2	95:5 96:12	133:13 150:15	111:18

[anywise - back]

Page 6

<p>anywise 186:13 apart 162:24 apologies 141:19 apologize 49:16 56:11 78:22 appearances 5:16 appearing 5:11 appears 41:16 95:3 appendices 141:24 appendix 57:2 application 3:13 9:21 31:5 57:24 applied 173:23 apply 173:24 appreciate 29:2 45:17 appropriate 28:14,17 29:8 37:9 162:14 178:10 183:14 approximate 107:13 approximately 1:16 35:22 65:5 149:15 april 11:13 57:7 57:16 84:12,18 97:2 131:2 180:17 181:1 184:2</p>	<p>area 33:9 46:22 51:2 53:1,1 areas 51:1 155:1 178:8 argonaut 52:6 135:11 argue 24:21 arguing 40:24 art 162:7 article 40:5,13 articles 30:11 30:13 asbestiform 21:3 60:16 asbestos 3:14 3:17 4:13 9:23 10:20 12:1,1 16:5 31:7,17 32:7,12 33:16 41:14 47:5 50:8 51:23 52:19,24 63:10,18,20 65:9 75:12 82:21,24 83:1 85:9,11 86:19 90:10 91:14 103:21 110:4 117:9 126:12 133:14,20 134:11 136:15 139:9 141:17 145:7,21 146:2 146:6,16 148:15 173:11 173:19 178:8</p>	<p>ashcraft 2:7 ashcraftlaw.c... 2:9 aside 79:21 163:20 asked 10:7 19:22 34:17 70:22 78:1 94:3 104:17 108:18 119:14 143:9 179:9 182:15 asking 59:7 72:21 86:3 183:10 184:8 asks 47:2 49:20 aspect 127:22 146:10 assign 40:21 assistant 28:20 assume 15:10 assuming 41:6 105:2 asterisk 42:13 attempt 164:22 attorney 182:10 attorneys 173:5 audience 105:5 audit 175:8 176:24 180:10 audited 173:16 auditor 172:19 172:24 authoritative 41:7 121:23</p>	<p>avenue 2:10,18 average 22:15 22:19 35:20,23 38:21 39:17,18 39:20 65:21 66:5,6,8,10 67:17,23,24 68:3,6,7 75:19 77:22 aware 38:24 44:18,24 45:20 92:17 94:11 95:17 121:15 122:16 179:11 awful 110:9 awhile 106:19 axis 155:15,15</p>
			b
			<p>b 69:21,21 baby 7:5 8:7 11:18 12:3 14:11,19,22 15:3,16,17 44:9 57:23 79:3 81:4 119:19 130:20 137:22 back 13:19,20 18:9 21:2 30:19 40:12 54:11 55:9 63:3 71:3 78:5,7 88:20 93:23 94:1 101:2 102:21 106:20 107:10 112:22 119:4</p>

[back - brought]

Page 7

130:9,11 131:11 138:16 152:18 158:6 161:21 166:22 169:8 170:4 184:4 bad 40:19 41:2 baffling 100:16 bailey 170:8,12 baker 86:22 balances 178:14 banging 129:10 bank 2:11 bankrupt 46:13 120:11 bankruptcy 119:23 120:5 based 36:3 110:7 143:8 171:4 basic 142:15 basically 24:9 32:4 110:8 123:16 basing 83:8 basis 83:16 158:12 181:4,5 bat 25:10 113:16 116:22 138:17 batch 178:4 beasley 2:3 beasleyallen.... 2:5,6	beating 101:15 beginning 58:19 87:24 97:1 102:21 131:23 begun 156:8 believe 12:13 14:5 16:11 61:24 69:13 71:8 84:5 95:5 95:16 98:24 142:5 143:21 150:22 believes 149:4 bell 94:17 151:19 bellwether 58:1 108:6 beneficiation 52:8,18 135:1 bentonite 66:15 68:18,22 69:12 69:22 70:10 71:6 best 72:13 114:11 116:5 118:19 125:2 129:12 133:18 138:9 158:5 164:20 183:17 betadine 146:13 147:5 better 38:21 55:20 68:11,14 92:7,8,24 97:13 113:8 120:16	120:16 152:5 152:21 153:24 biaxial 121:11 big 10:6 60:23 62:3 76:8 92:6 101:13 152:19 154:13 156:5 bind 97:23 98:2 birefringence 19:10 20:21 37:15 121:9 122:3,5,12,13 124:5 125:20 155:14 157:15 163:9,10 bit 25:22 29:13 73:2 77:20 101:8 119:6 139:16 143:22 144:8 172:10 black 33:9 98:8 blah 164:12,12 164:13 blanks 178:4 blount 60:5,19 62:2 63:9 113:12 117:14 134:16 140:1 179:5,5 blount's 91:16 blue 15:21 25:24 98:7 139:9 151:20 blues 23:4,14 body 10:12 129:20	bond 10:12 14:23 39:21 66:7,9,17 book 16:1 21:1 boots 87:14 borrowed 149:6 bother 50:2 bottle 81:5 89:11 120:4 121:17,17 bottles 82:1,2 94:4 bottom 21:14 26:24 42:14 55:24 57:7 73:16 89:9 139:11 brazil 120:13 break 29:12 53:19 94:3 130:1 138:17 169:9,15,21 breaking 148:17 brief 45:5 145:18 briefly 5:13 130:14 bright 124:8 bring 23:12 brittle 162:11 broader 128:2 brought 10:23 11:3
---	---	---	---

[brownish - change]

Page 8

brownish 98:7 151:20 bulk 10:24,24 10:24 47:4 bunch 99:15 119:21 bundle 27:2 66:3 155:11 165:16 bundles 67:24 75:14,14 90:24 110:11 141:15 146:20,23 149:8 152:3 153:5 154:14 154:19,21 business 174:8 175:3 180:3,12 buy 49:3	66:5 67:6,11,12 68:2,17,24 69:11 70:14 71:7,14 74:12 75:18 99:10 101:5 160:14 california 10:11 15:10 164:12 call 12:9 13:10 23:14 32:6 129:1,2,3 called 9:18 10:8 10:18 21:3 51:16 62:19 92:21 147:6 149:24 camera 62:12 campus 2:14 canada 33:9 cancer 58:1 car 176:8,8 carbide 10:10 36:11 99:12 153:19 carbide's 164:11 cargille 10:4 32:13 34:5 carolyn 12:17 case 11:3 15:1 35:8 95:19 96:21 108:4 132:13 133:2 182:7	cases 58:1 63:4 82:11 108:7,10 cata 50:5 catch 67:7 caught 152:16 cause 122:11 186:14 causes 101:10 causing 122:14 caution 171:15 cautious 56:14 cc 147:17 ceiling 101:13 101:14 cellulose 125:12,15,15 celsius 148:17 center 110:3 central 24:16 92:10 centrifuge 49:1 49:4 102:4 148:13,20,22 148:23 149:6 ceo 8:2 certain 8:4 38:14 155:24 156:1 certainly 16:9 49:21 50:14,16 53:3 60:23 81:9 91:17 95:22 109:20 134:12 167:17 181:23 certainty 83:18	certification 173:15 174:6 176:21 179:19 certifications 174:19 179:7 179:14,23 180:6 certified 1:18 173:12,18,20 174:14 176:4 179:10 186:19 certify 186:3,11 cetera 7:5,6 24:22 30:24 34:21 42:10 46:10 49:4,4 52:12 60:12 61:1 73:3 76:8 78:14,14 83:2,3 95:22 106:16 107:24 108:9 118:10 120:1 177:2,2 chain 13:6 chairman 104:8 chairman's 105:1 chamber 175:24 chambers 176:5,12 chance 60:17 93:8,10 change 34:17 47:19,19
c c 2:1 186:1,1 c10704 85:5 cal 34:8 38:3 calculate 37:22 37:24 38:3 calculation 141:4 calculations 7:9 34:9 39:4 57:24 calculator 23:10 calibrate 152:20 178:13 calidria 8:7,17 24:23 50:14			

[change - clear]

Page 9

101:21 163:7 163:10,23 165:5 changed 7:13 96:8,18 117:10 158:8 changes 47:24 162:1 163:2,8 changing 19:13 19:18 47:12 135:4 163:11 chapter 105:22 charge 101:18 101:19,22 107:17 chart 24:13,14 42:7 46:3 95:6 96:1 163:9 charts 30:23 32:15 33:19 42:4 122:7 155:13 161:1 chat 7:16,21 57:14 136:22 chatfield 105:23 136:22 check 95:1 177:2,18,19 checked 177:1 cherry 2:15 chief 51:21 children 129:21 china 80:22 82:1 chinese 12:14 14:3,6 80:15,21	choice 116:24 choose 34:22 chose 36:24 116:21,22 117:1 chris 166:2,4 166:13,14 christopher 2:11 chrys 50:22 chryso 124:5 chrysotile 4:12 7:23,24 9:14 10:3,4,9,10,14 12:5,5 13:20,24 17:23,24 18:23 19:7,10,14,16 20:20 21:20 23:1,24 24:3,15 25:2,7,17 26:2 32:20 33:5,6,8 33:11 35:3,5,15 36:9,10,17 37:4 37:14 40:10 42:10,15,17 47:9,15 49:11 49:23 50:5,9,22 51:10 52:10,12 59:4,11,16 66:3 66:8,22 68:10 68:20 69:3,6 71:19,21 72:1,6 72:7,13,15,17 73:20,24 74:17 75:18 76:24 77:3,16,23	78:24 79:6 81:1 81:7,10,20,24 83:8,19 85:4,8 86:21 88:22 92:7,15 94:7 97:1,14,16,23 98:11,16,21 99:11 101:6,18 103:18 105:19 106:1,22,24 107:16 108:12 108:18,24 109:13,24 110:2 111:2,3,9 111:13 112:13 112:14,20 113:5,19 114:8 114:17 115:11 117:1,20,21 118:5 119:11 121:18 122:2 122:18 123:20 124:6,11 125:19 126:2,4 126:24 131:4 131:13,23 132:16 133:6 134:7 135:8,16 136:9 137:15 138:2 141:22 142:8,14 143:2 143:10 145:7 146:6,16,19,23 148:15 149:8 150:15,19 151:4,14	153:19 154:8 154:20 156:8 156:10,23 157:5 158:14 158:23 159:14 159:17,21 160:3,6,23,24 161:5,13,14 162:1 163:2,23 164:10,13 165:7,18 167:11,24 170:15,17 171:17 173:22 179:10 180:16 181:2 183:24 184:13 chun 3:12,16 9:17 circa 131:13 circle 131:11 circled 41:16 circling 102:21 clarity 29:5,21 clark 96:21 classes 139:5 classic 115:5 clay 66:15 68:22 69:22 clean 103:9 clear 8:12 20:2 29:2,18 71:24 74:24 81:15 98:2 121:10 174:10 182:15 183:8,11,12,18
---	--	--	--

[clearly - confirm]

Page 10

clearly 19:1 61:5 64:23	111:8,11 135:19 136:2	committee 104:8,23,24	comprehensive 34:1
client 49:20 167:17 179:22 180:2	148:1,18 149:22 150:1,4 150:8,14	committee's 43:4	computer 141:19
close 23:18 24:7 24:10 34:22 74:2 89:20 114:6 139:17 139:17 153:10	153:11 colors 23:21 24:20 155:18	community 124:19 132:7 134:2	concen 74:12 concentrate 52:2 150:19
closer 40:22,23 closest 105:20	combine 130:24	companies 87:1 company 48:3 87:20	concentrating 135:5
clubman 10:12 clue 140:23	combining 82:6 come 21:9 40:2 64:23 67:5 74:23 88:23,24 89:13 92:17 97:15 104:9 109:21,23 175:7 176:18 176:21 181:6 181:24	compare 32:9 32:14 122:8 156:9	concentration 87:19 90:3 100:9 112:7 133:17 141:16
coalinga 10:11 161:8 164:12	comes 39:18 86:11 172:24 176:5 177:5,6	compares 72:19	concentrations 74:13 102:10 119:3 152:18 153:15
coast 53:13 code 32:10 40:2 105:6,12,17 126:23 141:21 143:4,16,24	comfortable 168:7,10,15	comparing 152:12 159:22	conclusion 84:17 147:4
codes 105:9 cognizant 169:6	coming 72:18 89:20 138:16 168:3,4	comparison 10:9 12:5 164:10	conclusions 49:24 171:13
cohen 2:10 colleague 19:22 96:22	commencing 1:16	competent 125:16	conditions 47:13
colley 81:22 color 40:21 colorado 51:13 51:20 83:5,19 84:21 85:2 88:16 90:12 97:21 98:18 99:4 102:6 106:11 110:1	commented 123:15 commerce 2:3 commercial 125:3	compiled 15:4 complained 49:12 complaining 110:19 completely 5:15 86:23 156:20,20 compliment 55:5 component 124:19 compounds 176:1,10	conduct 182:5 conducted 96:7 165:18 conference 6:14 confident 86:4 confidential 48:2 79:9 174:8 175:4 180:3,12 181:3,6,20,23 182:3 confirm 28:10 137:17 138:1

[confirm - court]

Page 11

157:4 171:4 confounding 69:8 71:20 confused 28:21 74:3 confusing 30:1 41:5 confusion 28:7 29:10 44:2 congress 104:19 108:20 143:9 conjunction 87:15 connection 111:12 consequences 112:5,8,11 consider 48:2 181:3,20 considered 45:9 86:8 consistent 75:23 81:3 165:10 constantly 40:16 constructed 34:4 consultant 90:1 166:21 167:7 consultants 91:20 consulting 82:23 90:1 121:21	contact 128:12 contacted 127:2,4 128:3,9 128:11,11 contain 63:23 contained 58:21 59:13 131:1 184:1 container 7:9 11:18 12:18 13:23 15:21 57:24 126:12 130:20,22 containers 7:13 14:20,23 15:6 15:18 46:19 80:4 126:3 contains 81:16 contaminated 110:17 contaminating 178:6 contending 161:24 content 64:6 contention 120:3 continue 45:10 continued 4:1 contracts 128:13 control 13:9 controls 177:2 controversial 61:2	conversation 62:21 conversion 10:4 34:3 conveying 151:22 copy 31:22 42:2 correct 7:8 22:4,5 26:8 28:23 29:16 38:12 39:15 40:2,3 42:11 50:10 70:11 73:13 75:2,5 79:19 80:1,2,4 80:17,20,21 81:17 82:4,5 88:11 94:6 103:1 118:2,8 119:9,12 126:14,16 129:7 140:6,7 140:11 141:24 145:22,23 146:3,4,8,9 149:19 157:6 168:7 172:11 173:13,14,22 179:16 186:9 corrected 10:5 corrections 7:10 10:1 11:15 correctly 44:20 74:7 118:5 145:8	corresponded 158:14 cos 129:14 cosmetic 4:12 17:24 36:10 50:23 60:4 65:9 69:6 72:4,14,19 74:1 78:24 79:3 79:5 104:11 117:22 129:14 134:11 137:3 140:22 145:6 146:12,24 163:17 167:22 171:17 172:3 173:11 counsel 2:2 138:17 186:12 counsel's 5:16 count 98:9 109:7 country 129:15 173:17 176:3 179:18 couple 27:6 46:18 49:19 160:10 course 17:23 52:4 80:24 82:19 136:10 159:4 174:1 court 1:1 2:24 5:18 53:22 54:1 59:17 85:15 88:1 144:15 169:7
---	--	--	---

[coverup - depending]

Page 12

coverup 134:5 cplacitella 2:12 cpirlaw.com 2:12,13 crack 105:8,17 cracked 105:6 105:12 126:23 141:21 143:3 143:16,23 create 38:11,23 created 17:16 17:18 18:19 20:5 creating 106:24 creek 15:20 critic 59:16 criticism 59:22 criticizing 123:15 cross 27:16,17 crow 2:3 crr 2:23 csm 8:14 9:2 49:15 69:21 83:4 85:6 86:4 96:7 100:4,11 170:8,14,17 171:9,17 cully 13:15 cured 16:11 current 55:15 57:8 58:23 77:14,15 166:18,19 172:12	currently 56:9 126:1 167:9 curriculum 3:24 custody 13:6 cut 70:23 93:9 169:2 cv 11:16 55:11 55:15,19,23 cvs 15:19	109:10 111:16 133:7 147:12 147:13 174:1 184:18 days 131:12 159:19 dc 2:8 dea 147:8 deal 60:23 62:4 178:15 dealing 65:19 75:18 112:23 113:15 155:9 decades 134:3 december 84:24 103:17 108:14,23 109:13 112:18 131:13,22 140:14 decent 133:3 decide 58:24 135:18 136:2 decided 115:10 143:1 decides 142:20 142:20 deciding 115:8 decisions 166:6 dedicated 64:6 deem 182:1 deep 83:14 153:12 defendant 2:17 defendants 44:17 46:4	defense 19:3,12 49:14 179:20 definitely 69:3 84:5 degree 78:16 83:18 183:10 degrees 148:17 deliberately 87:18 densities 139:2 139:6 density 51:16 60:3,9 61:1 63:11 64:14 75:7 81:9 83:1 83:20 85:7 86:5 87:17 88:5 89:6 89:8 90:11,18 91:2,8,13 92:20 96:10 99:2 100:2,6,11 101:6,23 103:14,21 104:12 105:19 109:6 113:9 114:1,7,8 117:14 119:6 132:5,11,23 133:1 136:12 136:14,16 138:23 139:8 139:17 140:2 140:15,18 150:18,22 depending 90:22
---	--	---	--

[deponent - doctor]

Page 13

deponent 5:9	33:15 59:9	121:20 124:14	discrepancies
deposed 96:20	63:10 178:6	125:11 132:14	149:21,21
deposition 1:14	develop 52:7,17	134:17 135:7	discuss 32:6
3:20,22 5:6,10	73:23 91:2	137:2 154:12	174:9,11,18
9:7 16:23 17:10	developed 63:2	155:21 156:20	discussed
27:7 31:8,19	86:7 90:12 99:6	156:21 160:18	146:17 163:21
42:20,24 43:6,9	109:20 136:17	161:4,7,9	discussing
43:16 56:1 57:3	145:19	162:18 163:7	170:7
57:18 58:2,15	developing	174:15 184:11	discussion
58:19 62:16	51:14 52:14,15	differing	62:15 84:17
133:4 137:14	83:10	166:17	87:24 89:24
140:1 145:1	development	difficult 125:4	dispersion 3:12
146:18 170:6	52:24 84:19	138:19 139:16	3:17 9:20 10:20
185:4	107:15 133:15	144:8	24:20 27:14
describe 7:2	developments	difficulties	31:4,17 32:8,13
described 140:6	96:24	148:9	92:10
describing 26:6	di 146:14	diffraction	dispute 68:1
detect 4:12 65:9	diameter	46:22	159:16
85:19,20 145:6	155:21 165:16	dig 95:24	disputed 93:4
detection 72:13	dictate 53:23	dilemma 59:21	distinguish
73:4,16 74:6	differ 76:15	dilution 90:16	121:10
76:19 85:9	difference 9:13	diplomat	district 1:1,2
90:17,19,21	20:22 60:20	186:19	dive 153:12
102:12 112:2,9	75:6 114:6	direct 179:15	divita 2:15
112:16 113:14	122:12,13,14	direction 39:13	doctor 8:21
114:11,24,24	124:7 125:18	42:10 124:12	17:13 18:15
116:13 140:23	139:20 155:3	directly 14:21	26:13 27:8
141:5,8 149:15	155:12 156:3	director 51:20	30:11 31:11,22
determine 35:9	differences	disagree 16:6	43:13 44:6 47:6
51:16 55:14	62:1 76:12	95:22	48:5 55:11
155:13 158:13	115:16 161:6	disagreeable	57:12 58:5,18
determined	different 7:1	53:5	61:12 65:4,6
30:3	19:2,10 41:4	disclosed 75:3	67:4,9 70:21
determining	44:11 50:8	disclosure	72:5 74:3 76:10
3:16 10:19	75:12,20 76:7,9	97:10	78:21 79:10
31:16 32:7,12	88:20 109:6		80:14 81:14

[doctor - either]

Page 14

87:22 94:1,18 107:12 130:11 133:2,23 144:23 159:10 164:7 170:6 document 10:6 10:6,18 11:24 18:18 34:15 45:19 52:4 70:18 88:17 documentation 53:4 documents 44:19,24 45:20 57:2 84:4 88:13 91:4 136:5 doing 27:19 37:8 47:11 48:24 63:1 64:19,20 65:2 72:22 83:9,10 92:14,19 96:7 97:3 98:5 99:19 106:18 109:3,5 110:3,8 115:15 116:12,14 119:21 128:17 129:12 134:23 138:18 139:6 140:21 148:19 149:24 150:2,3 150:24 152:16 153:13 157:15 165:24 167:16 168:7 170:13 170:13 171:16	173:8,9 175:8 176:19 177:11 177:15,16,20 177:21 179:2,4 dollar 115:19 116:3 double 51:16 52:1 85:7,16 86:5 180:3 download 32:11 downloading 57:13 doyle 12:11 dr 6:4 9:17 10:16 28:9 31:2 31:15 33:15 36:4 37:6,22 39:4 40:17 44:18,23 45:9 45:12,14,19,23 54:13 55:23 56:4 59:15 60:5 61:6 63:9 66:12 75:3 87:7,12,15 105:23 122:16 123:19 136:22 144:21 145:12 156:24 157:3 158:20 165:10 183:18 184:1 drawn 87:14 drenzi 2:13 drew 2:12 drimmc 34:6 41:14	drive 135:2 drop 172:19 dropbox 45:7 55:7 dropped 147:15 172:13 173:7 drum 129:10 dubour 166:2,4 166:13,14 duces 42:21 43:7 due 5:12 duly 5:23 duplicate 48:14 duplicated 49:8 dwindled 127:5 e e 2:1,1 3:1 4:1 5:9 8:2 32:13 87:14 186:1,1 earl 133:15 earlier 29:7 74:5 85:13 112:4 133:4 139:24 142:5 146:17 149:23 161:22 183:9 early 131:12 132:18 134:12 145:18 151:3 151:13,16 152:10,11 156:11 158:11 159:13,19,19 168:14 184:15	earnest 108:24 109:2 easier 80:12 152:8 easily 71:18 76:3 89:5 east 53:13 easy 98:19 121:10 ebay 46:10 129:16 edge 25:5 99:22 125:19 editor 56:16,20 effect 85:23 103:11 effectiveness 75:8 efficiency 76:14 77:15,18 77:22 112:6,6 efficient 74:16 76:23 77:2,7,10 78:15 101:3 117:21 118:19 effort 180:5 eight 66:17 119:1,1 either 14:9 19:1 19:4 25:22 29:18 32:13 56:7 94:17 103:1,6 122:3 168:21 169:11 177:11 178:2 180:8
--	---	---	--

[elap - exhibit]

Page 15

elap 60:7 63:7 63:12 92:17 96:15 electron 46:22 electronically 42:3 eleven 80:14 eliminate 135:8 eliminating 69:7 elongation 27:17 emitting 176:7 emphasis 3:14 9:22,23 31:7 employment 166:19 enclosed 87:13 engaged 134:5 england 88:11 ensure 5:14 entire 76:5 154:22 entirety 131:3 entitled 9:20 environmental 21:1 60:7 92:18 epa 11:2 113:2 equipment 92:24 107:24 177:3,24 eric 105:23 136:21 error 70:20 errors 7:8	especially 75:18 76:1 134:18 153:19 157:14 esq 2:15 esquire 2:4,5,8 2:11,12,20,21 essentially 30:22 87:16 established 132:7 133:9 134:1 135:13 138:20,24 144:6 150:18 estimate 156:16 156:19 et 7:5,6 24:22 30:24 34:21 42:10 46:10 49:4,4 52:12 60:12 61:1 73:3 76:8 78:14,14 83:2,3 95:22 106:16 107:24 108:9 118:10 120:1 177:2,2 events 158:1 everybody 33:6 53:21 110:18 110:20 everyday 117:8 evidence 117:12 ewald 2:20 3:3 6:3 7:18 17:12 26:16,22 27:3	28:24 29:11,23 30:9 31:10,21 41:20,24 42:6 43:2,11 44:5 45:16 46:24 50:17 53:14 54:12,23 55:8 56:3 57:5,20 58:4,17 61:20 64:24 67:3 69:23 75:1 77:13 80:8 89:15 93:24 94:16 95:13 104:6 107:11 120:23 121:14 123:1,13 124:15 125:24 126:8,20 128:14 129:4 130:3,10 131:19 133:22 135:24 137:23 139:23 142:4 142:22 143:20 144:13,17 145:3,16 150:12 157:10 159:9 160:8,20 162:23 163:12 164:6 165:21 166:11 167:19 169:3,17 170:5 175:1 180:13 182:14,19,24 183:15 184:7	184:22 exact 9:2 74:15 151:18 154:2 166:24 173:8 exactly 113:10 150:23 160:4 examination 3:2 6:2 85:23 86:1 examine 85:4 85:17,18 examined 5:24 example 32:5 34:24 44:7 51:3 51:4 88:3,6,10 88:15 94:12 115:5 137:17 164:21 174:7 175:23 examples 179:1 except 158:23 175:15 excess 107:23 excited 62:19 excluded 16:4 excuse 27:16 46:17 84:10 104:3 164:23 165:3 172:23 178:19 executive 2:14 exercise 66:1 exhibit 3:7,9,11 3:15,19,21,23 4:2,4,6,8,10 17:7,9,14 18:19
---	--	---	---

[exhibit - figure]

Page 16

20:3 22:2 26:5 26:15,15,18 27:9 29:6,9,14 29:15,19,20 30:1,4,5 31:3,8 31:14,15,19 32:19,23 33:1,1 33:3 34:10,10 39:11,24 40:1,8 40:12 41:12,21 42:1,19,23,24 43:3,9,13 47:2 55:22 56:1 57:1 57:3,10,15,18 57:21 58:2,6,15 79:22 80:11,13 94:9 144:20 145:1 exhibits 3:6 17:10 exists 39:2 experience 56:12 151:15 157:12 experienced 40:21 41:1 experiment 101:5 163:1,21 experimenting 116:19 135:6 expert 4:5,7,9 7:4 10:8 12:4 12:21 15:12 48:17 49:14 57:22 65:24 164:3,9 182:7	experts 19:3,12 25:4 35:11 48:4 49:6 56:15 59:23 90:8 121:21 124:1 181:9,9,16 explain 19:18 63:17 89:5 124:10 explaining 9:7 72:9 exposure 12:2 57:24 extensive 48:11 extra 8:24 56:14 extract 74:16 76:23 77:3 extracting 73:24 77:16 extraction 77:23 f f 186:1 face 24:13 facilitate 34:1 fact 17:20 27:10 29:15,16 30:3 77:11 92:9 117:5 facts 84:3 fair 27:24 72:5 93:6 109:1,14 115:23 123:7 123:10 162:2	181:16 182:1 fairly 8:4 59:24 102:1 136:17 136:19 falls 76:8 false 112:3,11 familiar 49:16 144:23 far 105:14 131:6 165:4 173:16 fastest 116:15 116:15 fault 78:22 144:7 151:10 fda 91:1,4 98:24 99:3 103:18,20 104:9,13,20 109:19 110:6 110:19,20,20 126:21 128:1 140:10,13 141:14,20,23 142:19 143:1,7 180:11 fda's 81:3 143:12 feasible 103:19 february 11:24 58:14,21 59:13 79:11,17 82:7 87:11 95:18 97:17,19 102:22 104:16 105:3,5,11	106:20 108:13 126:22 141:21 143:23 144:21 federal 16:13 feedback 54:1 feel 23:11 118:15 138:8 183:13,17 feels 91:21 felt 87:19 felted 86:18 ferrari 168:16 168:18 fiber 12:2 63:21 69:10 90:24 141:4,7 fibers 3:17 10:20 14:2 31:17 33:16 75:11 85:5 110:11 125:13 141:15 149:16 fibrils 155:3 fibrous 8:1,1 10:13 19:6,9,15 20:1,22 21:6 25:2,3,4,11 64:5 72:16 74:2 99:21 121:8 122:1 125:18 158:23 field 75:22,22 154:22 fight 101:16 figure 52:22 78:9
---	---	--	---

[figuring - four]

Page 17

figuring 99:18	179:22	floating 49:18	123:22 124:22
file 28:9,11	findings 137:15	floats 139:11	126:6,18 128:7
files 28:7	171:13	floor 2:19	128:21 131:16
fill 147:8	fine 15:14 29:1	flotation 52:7	133:11 134:9
filter 146:13	149:7	134:23 135:1	136:7 137:19
149:8	finer 135:6	fluid 37:3 38:21	138:22 142:2
final 148:12	finish 89:21	96:11	142:11 143:6
finally 47:13	118:23,24	flustered	143:18 144:2
73:23 101:4	125:5 169:10	183:21	150:7 154:11
120:20 152:15	169:16	flw 1:5	156:13 157:8
153:8	finished 47:10	focused 119:23	158:16 160:1
find 9:6 14:1	104:3 175:14	120:12 171:2,2	160:17 162:4
24:22 34:14	firecode 63:22	focusing 153:18	163:5 164:2
41:10 49:11,23	firm 56:15	foia 180:9	165:20 166:8
50:7 52:3 62:24	first 5:22 6:9,10	folks 18:7 60:10	167:13 168:13
64:8,15,17	11:6 16:16 17:6	follow 47:17	174:17 180:1
67:20 71:19	17:13 21:13	48:5 94:2	182:9
90:24 92:15	27:8 29:19	143:14,19	formula 38:6,7
100:1 110:2,4	32:21 54:24	151:6 152:24	38:11
111:1 114:11	66:24 92:10	175:21	forth 57:16
114:12 115:11	93:17 97:15,19	following 10:1	fortunately
116:12 117:22	114:22,23	85:2 157:20	56:19 178:15
117:23 129:17	116:18 127:9	follows 6:1	forward 110:21
141:6 152:8	145:4 159:15	172:15	125:2
finding 18:22	164:22 174:3	foregoing 186:4	found 33:6
33:18 36:9,16	fit 68:11,14	186:8	35:14 60:21,22
37:4 51:23 60:9	fitted 62:9	forensic 34:21	81:5,20 98:11
68:11 72:7	five 67:14 97:18	42:9	118:20 128:18
78:12 81:1 92:6	108:3 112:22	forget 59:17	128:22 135:15
109:20 110:15	120:14 124:2,6	forgot 19:21	136:15 142:14
111:9 113:16	130:2 154:22	81:18	149:3 153:23
118:3,5 126:2	157:24	form 50:13	178:2,2
128:17 141:6	fix 141:10	62:6 65:12 77:5	four 16:8 55:20
152:1 153:11	flexibility 162:9	78:1 89:3 107:3	64:1,2 71:15
156:17 157:19	float 52:9 89:9	120:7 121:5	75:15 81:13
170:16 171:16		122:21 123:9	82:14 92:2,4

[four - going]

Page 18

97:18 108:13	186:11	126:9 133:13	93:17 98:4,20
111:10 117:3	g	163:6 168:22	101:13 102:15
120:14 147:12	game 172:9	giant 11:5	104:7 107:6
154:22 176:2	gamma 35:10	give 13:9 22:19	109:5 110:21
fourth 4:5	36:9,17 39:13	27:14 30:18	113:6 114:20
11:12 79:22	42:10 154:14	38:14 47:20	115:24 116:3
82:8 94:5 131:1	156:22,24	51:4 102:23	116:10 119:4
180:16,24	157:6 158:13	103:3 147:19	122:23 125:12
182:6 184:1	165:8	176:20 177:13	129:10,16
fraction 100:19	gammas 165:12	177:14 180:8	132:22 135:10
fractionated	ganged 110:20	182:12	136:20 137:8
85:24	garbled 29:6,22	given 41:8	140:18 141:14
frame 18:20	gee 129:8	137:20 138:10	144:14 146:11
20:6 64:18	generally 7:1	171:10 186:10	152:17 155:18
99:10	generate 37:18	gives 22:14	156:1 158:3,6
frankly 119:22	37:20	78:18 90:16	164:3,4,16,18
free 23:11	generated	giving 95:10	164:20 166:16
front 7:2 30:12	71:13 178:1	99:16 101:2	166:22 175:12
58:8,10 95:15	generating	102:17 153:20	176:14,15
104:19 108:19	37:21	glass 149:9	184:18,21
109:19 143:9	genesis 51:9	go 16:14 17:6	goes 18:13
frozen 162:8	geographic	19:22 23:2 24:6	30:19 41:3 78:7
full 15:21 51:19	50:24	24:12 26:24	84:19 85:6
101:15	geologic 50:24	27:2 29:9 32:21	86:22 134:17
fumbling 84:10	52:23	32:22 34:14	139:11 161:4
fundamentals	geological	35:7 37:21 39:3	161:21 174:5
125:10	52:23	39:7 41:12	176:24
funding 106:16	geologist 159:2	42:14 43:12	going 8:17
106:21,23	georgia 15:19	44:6 48:12 51:8	22:15,19 48:24
107:14,20	gerel 2:7	54:4 66:7 67:16	53:8 54:8 55:20
131:14,24	getting 23:4,13	71:23 77:11	71:14 76:22
132:3	23:18 24:20	78:4 80:14	78:15,19 81:19
funds 107:23	33:12 69:4 74:2	84:12,16,17	82:10 84:7
furnace 48:23	77:8 109:9	85:14 86:2,9,13	93:13 114:13
further 35:7	112:7 114:10	86:16 87:5,6	115:24 116:14
72:24 86:1		88:21 89:9,11	117:13 118:16

[going - heard]

Page 19

120:15 129:24 132:13 137:16 138:4 158:11 167:15,23 169:8,19 174:13 180:10 185:3 gold 10:12 14:23 24:21 39:21 66:7,8,17 124:8,9 132:24 155:2 golden 40:22 golkow 5:4 gonna 22:16,22 24:16,17,22 37:17 38:7,8,16 39:3 53:24 58:5 58:12 68:2 72:2 73:22 75:10 76:4,20,20 77:17 85:1 103:5 116:6 117:6,17 118:14,18 119:2 120:2 127:18 128:24 129:2,2 133:19 137:8 138:4,5 139:7 150:11 158:17 160:6 164:15 174:18 177:21 good 6:4,5 51:11 69:19 83:23 86:7 87:3	90:6 91:7 102:14 117:12 117:24 124:20 125:1 127:23 129:18,22 135:20 136:3 137:16 140:19 145:13,15 169:23 175:18 gotten 172:8 grab 98:20 grace 63:21 grace's 63:4 graduate 109:9 graduates 106:12 gram 90:24 141:15 149:16 grants 106:16 gravity 101:15 great 7:20 30:8 30:10 58:11 98:6 134:5 145:9 151:5,19 greater 96:16 114:16 greenstone 12:13,18,23 13:1 grid 76:5 90:22 grind 161:18 grinding 161:23 163:2 163:13,16,23 165:7	group 102:24 103:12,22 104:1 105:11 126:22 127:2 128:2 141:10 142:7,21 143:1 143:15 144:12 144:22 176:16 guangxi 81:5 81:10,11,11 120:14 guess 15:13 32:17 58:23 72:9 82:20 97:8 142:17 152:5 171:23 172:9 guessing 22:18 gunther 37:2 68:24 guys 53:12 56:13 120:2,11 125:5 128:15 159:22 172:6 180:9 gypsum's 63:22 h half 19:14 35:18 75:16 100:4 hammondsville 52:13 135:12 hand 10:18 115:17 139:3 142:16	handle 178:8 handout 10:16 30:18,21 41:7 handouts 40:17 41:4 hands 49:20 happen 122:13 happened 16:6 56:23 127:19 158:3,4,4,4,5 happening 101:17 happy 53:19,19 55:4 169:11,18 183:16 hard 109:2 113:18 167:14 harder 23:7 harvest 117:21 harvested 112:12 135:3 hay 89:7,13 haystack 51:24 85:21 88:1,15 88:18,24 89:1 head 151:11 headed 160:22 health 126:14 126:16 127:5 hear 74:7 135:23 170:18 heard 5:14 16:19 29:7 151:17 154:17 166:3,17 170:15 171:7
--	--	--	--

[hearing - identify]

Page 20

hearing 16:5,8 60:16 93:8,11 108:19 186:10 heavily 127:18 heavy 4:11 49:1 60:2,8,24 61:21 63:11 64:14 73:18 74:9 75:7 76:14 81:8 83:1 83:20 85:8 86:6 86:19 87:17 88:5 89:6 90:11 90:18 91:2,7,12 92:19,21 99:2 100:1,5,11 101:6,23 103:14,20 104:12 105:6 105:18 109:6 111:14 112:19 113:8 114:1,15 116:20 117:13 119:5 127:1 132:5,11,23 133:1,5 134:3,6 136:11,14,15 138:23 139:8 140:18 141:22 143:2 145:5 147:18 150:17 150:21 held 5:7 help 88:4 107:23 125:7 135:2 147:15	helped 127:11 166:4 henderson 94:12,18 95:7 130:22 henrich 2:14 hesitant 16:12 hess 99:17,24 152:11 154:7 156:6,9,14 157:4 158:12 159:20 160:11 165:17 166:5 168:2 hess's 166:18 hey 54:13 128:15 129:24 hid 133:5 high 22:17 23:16,23,24 34:19 42:8 62:11,11 78:3 99:9 139:5 higher 35:4,13 35:13 36:8 37:3 37:9,12 42:16 64:16 92:21 100:7 102:11 156:23 165:12 165:13 highest 78:18 80:23 102:17 114:10 122:9 154:16 highlight 34:19	highlighted 39:10 42:8 highlighting 31:11 33:23 41:15 179:15 hill 2:15 hired 51:12 56:15 149:1 hiring 90:8 historic 46:7 historical 11:22 46:7 history 145:19 hits 89:21 hls 84:21 145:19,20 146:1,5,16 147:17 148:15 hobby 139:12 hold 18:11 20:4 50:21 57:13 89:10 107:4 111:16 182:20 182:20,21,21 hopefully 34:14 hoping 141:9 horrible 90:16 hour 53:8 89:21 93:14 109:3,4 130:1 139:6 169:9,19 hours 100:24 101:8 119:2 148:16 house 18:4	huh 167:3 hundred 64:1,2 126:2 128:17 128:22 154:22 154:24 155:16 156:2 hundreds 116:2 116:2 132:10 132:10 134:2 155:8 hynes 16:20,21 96:22 hyphen 9:19 hypothesis 50:10 hypothetically 175:6
			i
			idea 74:14 109:21,22,23 134:20 169:23 184:10 identical 32:16 34:11 36:12 identification 17:11 31:9,20 43:1,10 56:2 57:4,19 58:3,16 83:8 145:2 147:14 identified 26:17 94:5 130:18 identify 66:12 78:20 98:15 118:7 123:18

[identify - interlaboratory]

Page 21

130:13 137:13 156:7 161:16 identifying 17:22,23 20:20 50:23 78:12 122:18 123:19 154:7 156:10 157:5 161:14 images 20:4,5 27:22,24 29:8 122:17 171:8 imerys 11:22 immersion 41:14 impacts 59:11 59:14 63:17 important 21:10 34:12 35:1 54:2 importantly 23:2 37:11 impossible 153:7 impression 142:6 impurities 85:22 impurity 85:16 85:19 include 178:21 included 82:3,7 87:19 180:16 180:24 includes 178:18 including 44:10 53:21 137:2	incompetent 123:17 124:3 125:22 inconsistent 42:18 incorporate 104:21 incorporated 92:9 increase 145:17 increased 62:8 incredibly 125:4,20 index 157:6 158:13 163:3,8 163:24 165:8 indicated 55:23 61:24 87:2 130:12 indicating 41:17 indication 71:24 86:4 indice 35:24 37:3 96:11 122:9,9 154:13 indices 3:13,17 9:21 10:20 22:20 23:16,23 24:10 31:6,16 32:7,12 33:4,13 33:16 34:23 35:14,21 36:8 36:16 37:10 42:15 67:1 69:5 72:3,15 78:14	83:9,11 110:8 122:15 125:15 153:21 154:2 155:22 156:21 157:13 161:20 162:1,17 163:11 individual 123:5 individuals 114:3 infants 129:21 infinity 62:10 information 8:2,19 30:22 47:21 49:13 109:18 121:23 127:3 141:16 180:10 183:6 informed 86:6 ingram 88:20 inhibiting 49:5 initial 44:1 85:24 108:12 131:14 148:6 160:12 174:5 initially 97:17 97:21 98:9,14 148:11 152:14 inside 142:19 inspected 10:17 60:11 inspection 42:22 43:8,18 institute 51:13 51:14	institutes 33:7 instruct 91:12 instrument 116:3 intend 167:9 intended 71:5 intending 58:20 intent 70:24 interagency 102:24 103:12 103:24 105:11 126:22 127:2 128:2 140:11 140:13 141:10 142:7,20 143:1 143:15 144:22 interest 87:20 133:18 interested 86:15,17 172:24 175:16 175:16 186:13 interesting 9:6 16:22 18:11 25:18 41:10 59:21 123:24 interfering 68:20 intergrowth 66:3 intergrowths 124:10 interject 45:5 interlaboratory 140:10,16
---	--	---	---

[internal - kind]

Page 22

internal 13:9 internally 149:18 international 113:2,21 127:9 internet 15:9 introduce 176:11 invest 168:8 invited 103:2 104:9 invoices 54:14 54:16 55:6 181:8,12 183:9 involve 74:9 involved 63:3 85:21 106:7 123:11 124:1 involving 7:9 170:8 iodine 86:21 97:23 98:12,15 101:24 146:13 146:18,24 147:6,7,14 151:23,24 irs 111:2,3 iso 8:16 10:23 24:14 96:13 100:5,10 105:21 113:23 140:6 154:21 172:15 173:12 173:15,21 174:7	issue 17:21 60:14 101:10 111:22,22 126:14,16 127:5 141:19 issued 54:13,16 54:18 92:5 95:3 95:14,18 130:20,22 issues 16:11 103:9 114:19 114:20 115:3 120:11 129:7 141:11 issuing 94:19 94:21 italian 119:18 120:1,13	j4 111:20 jake 2:21 janet 13:22 janine 95:7 jb 13:23 jeanie 130:21 jersey 1:2 2:11 2:15 96:21 jesus 61:14 jewald 2:20 jkeester 2:21 joe 12:10 14:24 john 2:20 7:16 29:5 41:19 64:22 74:23 80:7 129:24 131:17 144:16 185:1 johns 15:20 86:2,6,14,22 110:3 johnson 1:6,6 8:7,7 12:2,20 12:20 14:11,18 14:19,22 15:3 15:16,17 46:11 46:11,13,13 51:12,12 52:6,6 52:21,21 57:1,1 79:3 81:4 82:23 82:23 83:15,15 83:22,22,24,24 84:4,4 85:3,3 91:9,11,11 118:6,6 119:19 127:7,8 130:19	147:20,21 161:11 johnson's 7:5 11:17 14:20 44:9 57:23 91:9 137:21 joined 172:14 journal 9:18 journals 56:8 judge 16:3 58:19,24 59:9 61:8,8,16 92:4 92:14 93:7,7 judge's 16:13 judges 181:24 july 12:22 jump 100:23 113:18 june 15:11 junior 139:5 jury 88:4 89:6
	j		k
	j&j 36:17 46:3 46:7 73:8,11 79:16 80:19 87:7 90:1,13 91:16 94:7 119:22 120:5 131:5 133:5,17 134:4,15,24 135:6,14 136:4 145:19 165:18 167:10,21 170:21 171:6,7 172:3 180:9 j&j's 11:22 j3 62:3		k 2:7 keep 47:11 121:12 162:8 162:11 keeping 91:21 keester 2:21 kevin 16:20,21 96:22 kidding 61:19 89:19 kin 186:12 kind 16:18 19:21 61:3

[kind - late]

Page 23

65:17 100:16 123:23 131:10 139:13 177:15 kinds 76:6 139:1 king 2:18 kirch 94:13 95:18,19 130:19 147:22 knew 56:15 64:5 91:17 113:9,14 115:1 116:14 159:14 160:4,5 know 7:3 10:24 14:17 16:7,11 16:14 19:17 20:15,19 21:6 21:19 22:11 23:3,19,22 24:19 26:3 27:6 27:13,14,15 29:22,24 30:20 32:2,10 36:2,6 37:19 38:5,11 38:13,14,19 39:4,19 43:24 46:6,8,11,13,14 46:19,21 47:20 47:24 48:22,22 49:14,19 51:4,9 52:16,17 53:7 53:12,16,17 54:18 55:16 56:21 59:2,8,15 59:20,24 60:15	60:20,22 61:3,5 61:6 62:7,14 64:6 66:2,20,21 67:15 71:13 73:4 76:8,19,21 77:6,8,9,11,11 77:12 82:19 83:23,24 84:3 84:20 89:10 90:9,15,18,20 91:4,15 92:13 92:18,23 93:5,6 94:15,23 96:13 97:6,7 98:1 99:5 100:10,13 101:1 102:15 103:1,3,5,10,18 105:23 106:9 106:11 107:21 109:4,6,9,18 110:17 111:21 111:24 113:14 113:17,20 114:2 115:4,17 116:2 117:11 117:20,22 118:11,24 119:16,22,24 120:10,16,20 121:19,19,21 121:22 123:17 123:23 125:7 125:11,21 127:7,9,13,18 127:19 128:10 128:23 129:1,1	129:8,14,19 131:6 132:3,17 132:22 135:10 136:21,24 137:7 138:3,6 139:19 141:7,9 143:7,8,12 148:8 154:14 155:6,10,15 156:22 158:1,5 158:6,19,21 162:17,19,19 165:14 166:16 167:17,18 168:10,16 170:9,11 171:22 172:8 172:17 173:16 174:21 175:4,6 176:6,7,9,12,14 177:12,15,16 178:5,7,10 179:4 180:7,11 181:8,15,17,19 181:23 184:12 184:17 knowledge 96:8 142:19 157:13 179:9 knowledgeable 36:7 known 51:12 74:13 75:22 134:10 knows 133:8	kslaw.com 2:20 2:21 l l 87:14 lab 13:11 60:21 60:22 62:1,3 63:15 64:12,13 91:12 106:10 106:15 125:3 132:21 137:24 138:1,5 139:22 172:11 labeled 17:8 20:4 27:9 29:14 30:2 laboratories 10:17 47:22 laboratory 47:4 60:7 62:23 92:18 173:17 laboratory's 44:9 labs 30:19 41:8 48:7,10 176:2 lack 97:12 152:5 laid 102:7 113:13 lake 33:9 lanier 88:11,24 large 67:18 85:23 146:20 larger 124:19 late 132:18 152:11,11
--	--	--	--

[late - lizardite]

Page 24

156:8 159:19 latest 55:17 law 56:15 law.com 2:16 lawyer 59:8 lawyer's 45:14 lawyers 106:24 107:15 180:19 182:4 183:24 lay 145:21 146:2,7 leanna 2:5 leanna.pittard 2:6 leave 8:21 39:24 79:20 leaving 163:20 lee 14:9 60:21 62:15 91:12,17 181:13 legal 34:20 97:9 182:12,16 leica 92:9 leigh 2:4 6:20 55:1 57:14 182:21 183:2,2 183:22 leigh.odell 2:5 length 65:20 66:5,8 154:3,23 155:16 lens 62:10,20 62:20 92:11 letter 86:17 104:9,20	level 74:6 85:16 108:17 120:19 155:24 levels 65:9 71:7 71:12 72:7 153:10 levy 122:7 155:13 lhg 1:5 liability 1:7 libby 63:23 life 147:12 light 21:9 100:19 121:24 133:7 likely 65:8 likes 24:13 lima 2:22 5:3 limit 72:13 73:4 73:16 85:9 102:12 112:2,9 112:17 114:11 114:24,24 116:13 141:5,8 149:15 limitation 87:9 limited 44:11 limits 76:19 90:17,19,21 140:23 linda 15:23 line 73:16 146:11,11 165:5 liquid 4:11 34:16 35:9 36:3	49:1 60:2,9 61:1,22 63:11 64:14 73:18 74:9 75:7 76:14 81:8 83:1,20 85:8 86:7,19 87:17 88:5 89:6 90:11,18 91:2,8 91:12 92:19,21 99:2 100:2,5,11 101:6,23 103:14,21 104:12 105:7 105:18 109:6 111:14 112:19 113:9 114:1,15 116:20 117:14 119:5 127:1 132:5,12,23 133:1,6 134:3,7 134:21,22 136:12,14,15 138:23 139:8 140:18 141:22 143:2 145:5 147:18 150:17 150:21 161:18 162:7,8,11,24 163:20 liquids 34:5,22 41:14 list 4:3 11:7 45:9 79:24,24 80:19 81:15 listed 45:9 82:1 94:8	listen 53:1 lists 42:11 literally 20:17 32:16 literature 39:1 82:22 83:13 90:2 litigation 1:7 5:8 30:14 42:9 44:16 45:2,22 63:16 64:10 75:4 123:11 124:17 133:8 172:4 178:18 178:21,23 little 25:22,23 28:21 29:12 41:5 42:13 63:2 73:2 77:20 78:21 92:7 100:16 119:6 139:16 144:8 155:2 172:10 lizard 9:11 lizardite 3:8 9:12 16:17 17:8 17:14,16,19 18:2,14 19:5,17 20:4,12,14 22:2 22:8 24:4 25:2 25:8,17,19 26:4 26:10 27:2,11 27:24 28:1,9,11 29:6,16,20 30:2 30:5 158:24
--	--	---	--

[llc - made]

Page 25

llc 6:13 8:3 145:20 146:1,5 148:15 locate 9:10 log 76:4 logistics 6:9 lois 1:17 2:23 186:18,18 long 17:2,5,14 17:20 20:15 53:20 76:3 100:23 110:9 110:19,24 117:12 118:8,9 147:13 149:13 longer 132:21 longo 1:14 4:11 5:9,21 6:4 8:2 11:13 28:9 42:21 43:6 44:18,23 45:12 45:19,23 54:13 55:23 56:4 66:12 75:3 83:4 122:16 123:19 145:12 150:11 longo's 45:9,14 144:21 184:1 look 13:4 14:16 18:7 20:16 24:6 24:15 27:13 28:1 30:23 32:15 34:2 38:8 46:6 49:21 50:6 51:2,5 64:5 66:20 67:16	71:23 76:4 87:5 90:22 94:23 98:4 99:18 102:3,8,9 103:13,13 115:23 118:8,9 120:13,13,14 122:10 124:9 124:12 125:14 134:16 144:23 149:1 152:21 154:19 155:3 156:9 158:5,10 160:6 161:2,3 166:9,16 175:8 175:9 176:22 177:3,3,4,23,24 177:24 178:1,3 178:17,20 180:11 181:5 looked 20:18 31:24 32:1 82:8 100:17,17 136:16 153:13 158:19 looking 19:9,9 22:1,8 26:5,12 27:21,23 33:14 39:9 42:4 47:1 49:22 51:24 65:17,23 66:23 67:19,23 68:22 69:9 70:21 71:18 75:12,24 79:21 80:10,13 82:20 89:4,5	90:10 91:9 93:6 98:19 101:21 112:19 114:2 117:7 146:22 155:4 157:5 159:5,10,12 160:4 164:8 173:1 175:7 178:13 looks 14:5 24:23 50:4 126:3 153:16 losing 102:13 lost 70:17 104:14 lot 20:19 53:3 62:12 83:7 87:22 102:11 102:11 106:6,7 115:2 117:17 119:18 127:20 140:21 147:8 151:20 158:2 162:21 165:1 168:8 175:23 175:24 180:5 love 176:9 180:4 low 37:14 72:12 85:16 lower 70:14 71:12 72:8 78:6 78:7 89:8 100:4 100:13 102:18 156:22	lowest 122:8,8 luck 91:6 lucky's 14:24 lunch 53:18,21 53:24 93:16 94:1
			m
			m 13:22 14:17 15:1 94:24 95:6 95:19,21 130:14,18 180:21 m65947 8:24 m68483 13:13 m70484 15:24 m71046 13:16 m71095 13:22 m71109 14:5 m71111 14:5 m71166 14:11 15:17 m71180 15:18 m71216 15:2 m71241 15:5 m714 95:19 m71730 95:8,12 130:21 m71740 95:20 130:19 machine 186:5 made 7:10,11 47:19 51:22 58:18 65:7 73:1 100:19 116:23 141:4 147:10

[made - mean]

Page 26

157:18 161:12 172:1,2 magenta 25:24 154:16,18 155:1 162:19 164:24 magnitude 72:8 124:7 main 36:5 41:11 maintain 47:7 maintained 47:3 major 34:4 majority 26:2,3 86:1 make 8:22 11:14 18:1,23 26:20 29:1 38:8 52:3 63:2 69:24 81:14 91:7 97:7 99:20 102:16 114:9 116:4 117:8 121:12 125:23 162:11 169:20 183:8 183:11,12 makes 122:2 155:11 159:3 making 166:5 manufacturer 167:22 manufacturers 110:13 119:24 134:24	manville 86:3,6 86:14,22 110:3 maple 2:10 march 55:24 maria 2:22 5:3 marie 13:15 mark 17:6,7 31:3,14 42:19 43:3 55:22 56:24 57:10,15 58:12 88:11 144:14 170:8 170:12 marked 17:11 18:19 20:3 27:9 30:1 31:9,20 32:19 39:11,24 40:8 43:1,10 47:2 56:2 57:4 57:19 58:3,6,16 80:10,13 145:2 market 14:14 126:13 127:15 128:4 133:19 marketing 1:7 mas 8:2 13:11 14:10 15:4,17 15:24 17:14,17 21:16 24:2 25:1 31:23 36:16 38:23 47:7 57:16 58:13 64:19 65:2 71:6 77:2,6 78:23 79:5 80:4 82:9 94:7 95:7 96:7	97:13,14 105:6 107:1,14,16 108:23 109:12 112:19 115:11 118:5 121:16 122:18 123:18 126:1 130:19 131:3,23 145:20 146:1,5 146:7 148:14 149:9,18,22 165:22 166:18 167:21,22 168:1 172:11 174:13 179:8 179:13 180:18 181:11 183:23 mas's 7:23 77:15,23 79:16 97:1 130:14 131:12 146:15 151:3 masses 86:19 match 153:2 157:14 matched 154:8 matching 34:3 160:7 material 10:24 50:4 86:15 101:7,10,24 102:13 146:14 materials 3:14 6:13 9:22 11:6 20:23 31:6 44:8 44:14 45:8,8,9	47:4,16 48:11 48:13,15,16 69:8 math 23:9,22 mathematical 34:9 matrix 71:20 matt 128:11 matter 5:7 23:3 186:4 mccrone 90:9 mccrone's 161:3 mcdevitt 2:14 mclean 15:1 mdl 1:5 4:5,9 7:5 11:20 12:15 46:18 54:14,17 57:16,23 58:7 59:19 82:9,11 94:6 97:10 119:10 120:4 171:14 180:17 180:24 182:6 183:7,14 184:2 mean 9:19 20:17 22:22 23:21 24:12 29:19 62:4,21 65:13 76:21 78:10 84:2 86:14 90:6 97:6 98:6 105:22 106:15 107:17 109:7 110:22 115:4 121:6,7
--	--	--	--

[mean - minerals]

Page 27

121:19 125:1 139:2,12 142:18 149:2 154:14 157:15 157:17,23 167:14 172:3 174:18 177:19 meaning 21:9 151:6 means 15:6 measure 176:12 measured 34:23 122:5 measurement 33:24 measurements 34:20 37:12 measuring 3:13 9:21 31:5 175:24 meeting 104:13 104:16 105:4 memo 87:12 91:23 mention 140:8 143:2 147:3 mentioned 30:12 39:11 40:1 48:7 87:23 90:1,7 91:24 112:4 130:13 141:23 meters 40:23 meth 147:9	method 3:18 4:11 10:21,24 31:18 49:8,15 51:15,17,19 52:2,18 60:8,13 63:2,6,7,8 72:7 73:19,21,22,24 76:14,18,23 77:2,16,23 78:15,18 83:4,5 83:6 84:6 86:5 86:7,11 87:9,13 87:16,17,19 90:3,6,11,14,16 91:16 93:3 96:13,15 97:1 97:16 100:4,5 100:10,12 104:18 105:24 106:13,24 107:16 108:13 108:24 109:13 110:6,9,18,22 111:1,14,16,20 112:20 113:12 115:15 117:12 117:18 118:20 126:4 128:16 132:17 133:6 133:12,16,18 135:14,19,20 136:3,4 138:9 139:22 140:2,5 142:8 143:3,11 144:6 145:5,19 147:6 149:22	149:23 150:1,3 150:4,9,11,14 154:21 170:8 171:9,18 179:10 method's 144:7 methodology 85:7 104:10 118:11 131:24 136:18 150:19 methods 47:16 48:11,13,15,17 90:21 92:16 124:18 137:10 137:11 140:9 140:15 172:15 174:7,15 methvin 2:3 methylene 101:24 michelle 2:8 55:1,2,5 95:19 122:7 155:13 mickey 37:2 68:24 micrometers 155:16,18 156:2 micron 66:6 75:16 155:22 155:23 microns 65:19 66:6,9,10 68:4 75:16 76:3 154:23,24 155:24	microscope 9:18 30:17 31:4 50:2 62:9 76:11 76:16 115:19 microscopes 20:10 92:8 microscopy 121:24 mid 90:8 miles 2:3 mill 162:8 milligram 110:11 milligrams 146:12 milling 50:11 50:15 161:23 163:22 165:7 million 90:23 90:23 141:8 181:13,14,14 mimic 176:5 min 156:22 mind 29:5 64:22 75:7 80:6 95:10 117:10 minds 19:19 mine 10:11 52:6,14 81:11 81:11 161:8,11 164:12 mineral 132:14 136:13 minerals 35:3 42:15 53:5 71:21 121:11
---	--	---	---

[minerals - never]

Page 28

132:6,12 139:1 139:16 156:23 mines 21:24 51:5,6,8,14,20 52:20,24 81:13 83:5,19 84:21 85:2 88:16 90:12 97:21 98:18 99:4 102:6 106:12 110:1 111:9,11 120:15 135:9 135:19 136:3 148:1,19 149:23 150:1,4 150:8,14 153:11 161:5 minor 7:11 minus 109:15 109:16 141:5 162:15 163:17 minute 93:16 93:16 169:15 169:21 minutes 27:7 53:10,17,18 93:10 130:2 148:13,14 184:15 misconception 98:14 misidentificat... 20:1 misidentified 125:12	misidentifying 18:2,24 19:4,6 19:15 21:11 25:1,11,17 33:11 99:21 120:21,22 121:8 122:1 missed 54:24 55:13 81:19 missing 7:20 117:23 missouri 15:22 misstated 131:17 misstates 120:7 mistake 38:9 125:22 mistaken 55:4 mistakenly 70:22 misunderstan... 70:13 misusing 33:21 modification 97:7 moment 79:21 103:19 107:6 money 52:21 172:20 173:7 180:18 182:3 183:18,20,23 monitor 62:11 monokote 63:21 montana 10:11 39:22 63:23	66:9 110:14 120:1 164:12 montgomery 2:4 month 96:22 97:2 109:16,16 months 119:7 morning 6:4,5 109:10 morton 86:21 mother 14:21 motivate 127:11 motivated 127:14 mount 34:16 move 84:23 moved 26:15 64:11 moving 10:15 115:21 mparfitt 2:9 muffle 48:23 muted 124:8 n n 2:1 3:1 4:1 name 5:3 28:14 49:2,2 105:1 123:4,18 137:13 166:10 166:15 170:22 name's 28:17 166:10 named 28:11 29:19	names 28:8 94:17 nanometer 40:22 nashed 87:7 national 33:7 nature 5:12 navstar's 107:19 nay 103:6 nearly 126:2,12 necessary 85:17 need 11:3 29:21 64:14 69:15 97:11 118:10 118:11 125:5 140:9,15 145:12 183:11 needed 18:7 37:2 104:20 117:7 needle 85:20 88:1,15,17,23 88:24 needles 51:24 52:2 89:8,9,11 needs 96:4,4 negative 101:20 negatives 112:12 neither 186:11 net 85:23 never 17:20 18:5 19:23 21:9 24:24 49:12
--	---	---	---

[never - object]

Page 29

60:14 67:5,10 75:23 87:6 88:16 90:7,10 90:13 98:17 105:18 116:6 119:20,20 133:7 147:13 148:2 150:11 165:4 177:15 178:24 new 1:2 2:11,15 2:19,19 59:1 60:6,6 62:20 63:7,12 69:11 71:13,16 92:17 96:15,21 176:8 184:15 newsome 95:4 95:5 96:8 newsome's 11:17 nice 176:8 niosh 113:4 nist 10:13 33:13 35:5,15 42:16 98:6 99:7 113:4 146:19 151:5 151:16 152:13 153:2 154:9 156:7 160:13 161:15,15 164:13 nitrogen 134:21,22 161:18 162:7,9 162:12,24	163:20 nm 40:23 nobody's 124:9 non 3:13 9:22 31:6 60:24,24 172:3 nonasbestiform 21:3,5 noncontrover... 144:5 nonlegal 182:2 nonlitigation 179:6 normally 62:13 92:11 north 127:10 notebook 11:5 12:7 15:4 notebooks 46:5 158:8 noted 5:16 notice 3:20,22 16:23 20:19 42:20,21,22 43:5,7,7,14,16 43:17,17 44:1,3 notices 91:3 novel 132:16,17 138:18 139:21 november 130:22 number 6:24 7:12 8:17 9:2 13:9,11 14:17 15:1 20:24 29:9 31:8,19 32:2	42:24 43:9 44:7 44:11 45:6,7 56:1 57:3,18 58:2,15 73:9 79:24 80:1 95:1 95:6,7,10,19 112:24 115:23 119:14,15,17 130:14 133:13 145:1 numbers 90:15 95:21 110:10 130:18 nvlap 10:18 172:12,13,23 174:4 175:9 180:8 nw 2:7 o o'dell 2:4 6:20 7:15 26:14,19 28:2,6,16,22 29:4,17 30:7 41:18,22 43:23 45:4 46:15 48:18 50:12 53:9 54:3 55:3 61:7,11,15 62:5 64:21 65:11 66:11 69:14,18 74:22 77:4,24 80:5 89:2 94:14 95:9 104:2 107:2,5 120:6 121:4 122:20	123:8,21 124:21 126:5 126:17 128:6 128:20 129:23 131:15 133:10 134:8 135:21 136:6 137:18 138:21 142:1 142:10 143:5 143:17 144:1 145:11 150:6 154:10 156:12 157:7 158:15 159:7,24 160:16 162:3 163:4 164:1 165:19 166:7 167:12 168:12 168:20,24 169:14 174:16 175:13 179:24 182:8,11,17,22 183:3 184:5,16 184:24 object 50:13 62:6 65:12 78:1 89:3 107:3 120:7 121:5 123:9,22 124:22 126:6 126:18 128:7 128:21 131:16 133:11 134:9 136:7 137:19 138:22 142:2 142:11 143:6
--	---	---	--

[object - organics]

Page 30

143:18 144:2 150:7 154:11 156:13 157:8 158:16 160:1 160:17 162:4 163:5 164:2 165:20 166:8 167:13 168:13 174:17 180:1 182:9 objecting 183:5 objection 45:6 45:11,12 77:5,5 122:21 184:6 objections 3:22 43:5 44:13,14 44:23 45:13,14 45:14,18 objective 62:10 62:20,20 92:11 observed 34:3 obtained 179:13 obtaining 179:23 obvious 128:23 obviously 38:15 56:21 59:8 124:13 october 10:14 65:24 70:1 86:16 164:4,9 offered 174:20 offering 32:20 50:18 171:14	official 63:7 oh 10:16 12:21 12:22 13:11,19 14:4 19:22 23:8 34:14 36:2 40:11 62:18 68:21 69:9 70:19 78:7 81:18,21 84:16 95:20 104:7 112:4 114:4 120:21 125:11 125:12 139:10 177:11 okay 6:8 7:14 9:3 10:6 13:3,8 16:15 20:8 24:18 26:20 27:4 29:12 30:6 31:3 33:3 38:10 40:15 42:7 44:6 46:2 49:7 54:6 55:18 56:9 67:21 69:19 70:21 71:2 72:11 73:10 76:22 77:21 84:11 85:1 86:13 89:18 93:17,19 94:1 95:2 96:3 97:5 102:16,20 108:5 109:12 111:11 114:12 115:13 116:5 123:2,5 125:6	130:11 131:7 133:2 138:7 144:18 145:4 145:24 146:5 146:21 147:24 148:3,5 149:7 149:14,20 150:13 155:19 160:21 164:20 166:3,17 169:4 170:20 171:23 172:5 174:10 176:16 181:16 184:14,17,21 old 20:10 115:18 oldie 12:21 olympus 62:8 once 51:18,18 56:12 76:11 99:23 117:11 118:12 128:19 137:3 147:10 155:24 162:13 176:21 ones 14:13 15:7 80:23 81:1 99:16 150:9 161:7,8 179:18 ontario 21:15 21:17,20,23,24 opaque 3:13 9:22 31:6 open 89:12 openings 90:22	operating 47:3 47:7,11 opinion 35:16 49:5 59:10 65:16 66:19 83:13,15 84:1,3 86:10 92:5 106:3 113:6 127:12 140:22 141:3,17 182:2 182:13 opinions 16:4 19:6,12,14 32:19 40:9 82:11 182:7 opportunity 43:15 opposed 75:8 optical 50:2 92:7,8 optimum 73:22 73:24 oral 42:20 43:5 43:16 orange 40:23 orangish 22:12 order 16:13 58:20 66:19 72:8 85:19,24 138:9 147:7 183:14 orders 124:6 organic 101:23 176:1,9 organics 48:24
---	--	--	---

[organization - percent]

Page 31

organization 113:3,21	41:12,19 42:1 44:8 66:14,16	parentheses 21:15	pause 5:13
organizations 129:5	69:20 70:7,8,9 81:16 84:18,20	parfitt 2:8	pay 107:23
origin 97:13	85:14 86:13	part 11:1 12:7	peer 30:16
original 11:24	87:5 95:15	39:9 48:6,6	32:23 35:12,17
12:15	105:22 145:4	135:23 146:15	36:14 41:6 63:9
originated 21:17,21	164:15,18,20	149:7 150:13	82:22 83:13
osha 113:3	164:21	150:13 166:20	90:2
ought 173:7	pages 9:19	166:23	pellet 78:10
181:22	66:13,14 80:14	particle 153:4	100:18,18
ounce 12:17	paid 180:18	163:23	134:19
outgassing 176:1	182:4 183:7,7	particles 135:2	pending 183:1
outlined 184:3	183:23	139:9,10	183:4
outside 22:24	panning 132:24	149:11 154:7	people 34:16
24:17 121:16	paper 7:1 9:17	particular 36:13 132:12	91:9 93:5
123:18	32:11,24 33:1	148:23	110:23 123:15
ovarian 58:1	33:22,23 35:12	parties 5:10,14	128:24 129:6
overall 68:3	37:8 49:10	186:12	131:10 132:14
overstated 143:22	56:17,19 63:9	partner 16:20	140:21 165:24
overview 7:7	82:24 127:24	parts 38:14	172:17 174:20
own 90:13 91:7	134:16 138:6	112:15 176:8	180:4
106:18 136:14	138:12 140:11	past 8:5 13:6	percent 8:10,10
	140:13 141:24	67:13 106:4	8:15,15 9:1
	165:11	127:19 132:15	63:1 64:8,9,16
	papers 56:4,5,7	149:24	66:15 68:17
	56:10 132:10	pat 172:21,22	69:11,21 70:13
p	134:3 138:6	173:9 175:11	71:7,19 72:8
p 2:1,1	paperwork 147:8	patent 86:8	73:11 77:19,19
p.c. 2:3,14	parallel 22:8	patented 87:2	78:4 85:11,17
p.m. 54:11	24:11 27:16	patenting 87:4	102:11 112:5,6
93:20,23 185:4	124:11 155:15	patterns 46:22	112:8,10
page 3:2,6 7:6,7	164:23 165:3	paul 99:17,24	113:17 126:2
7:7 8:23 22:1	parameters 38:4	152:11 154:7	128:18,22
33:22 34:15		156:6 165:17	141:2 146:13
39:10 40:20		166:5 168:2	146:24 149:15
			153:6,6 156:16
			170:16

[percentage - pointed]

Page 32

percentage 72:6 74:14 100:7 153:1 161:13	photographed 20:6	182:12	122:4,11,18
percentages 99:8,9 110:11 152:15,22 153:1	photographs 9:11 28:15	plm 7:22 8:8	123:20 125:16
percents 141:12	phrase 97:13	16:4,7,10 18:3	126:4,24,24
perfectly 90:5	pick 98:7 152:6 155:17 184:19	20:21 21:8 24:3	128:16 131:3
period 65:2 120:5 152:10 156:11 167:6	pictures 73:3	25:7 27:13,20	131:12,23
perpendicular 23:3 24:11 27:15 124:12 164:22 165:4	pieces 25:19,23	32:20 36:16	132:17 137:4,8
perpendiculars 165:14	pigment 152:5	40:9 41:8 47:5	137:15 138:2
person 54:2 128:12 133:17 137:13 166:4 166:13 177:6,7 177:10	pinch 152:7	47:8 58:20	138:10,12
personal 186:7	pinkish 164:24 164:24	59:11,12,18,23	140:21,24
perspective 59:9 96:6 182:16	pittard 2:5	60:8,10,13,18	142:8 143:2
ph.d. 1:15 5:9 5:21 8:2 42:21 43:6 106:10 109:9	place 149:9	61:21 62:2,24	145:21 146:6
photograph 28:18	placitella 2:11	63:11,17 64:4,7	146:16 148:15
	placitla 2:10	64:15 65:7,8	150:15,24
	plaintiff 106:23	67:5,10 68:12	151:4,15
	plaintiff's 43:14 179:19	72:7 73:5 75:8	157:15 158:10
	plaintiffs 2:2 43:4 54:17 107:15 180:18 182:4 183:24 184:11	75:11,13,23	159:21 165:18
	planning 171:12	76:3,16 78:12	167:10,23
	plans 173:24	78:20 79:13,16	171:2 172:21
	plates 25:5 71:22 74:1 83:2 99:22	82:13,16 83:10	173:2,18
	platy 72:17 125:19	83:19 92:1,8,16	179:10 180:15
	please 5:13 28:20 58:8 80:6 95:11 107:7	92:24 94:7	181:1 183:24
		96:12 97:1,4,14	plow 169:11
		97:16 98:4,20	plus 82:19 83:3 109:15,16
		99:3,17 105:6	point 7:10 37:18 51:8 53:16,17 63:24 83:23 100:1 106:8 108:14 118:22 126:7 129:11 154:5 168:1,5,9 175:22 181:14
		106:22,24	pointed 33:10 156:24
		107:16 108:12	
		108:24 109:13	
		109:24 110:2,4	
		111:8,9,17	
		113:5,12,23	
		114:11,16	
		115:11,15,18	
		115:22 116:15	
		117:1,4,6,17	
		118:6,12 119:3	
		119:10 121:17	

[points - probably]

Page 33

points 41:11 pol 27:18 polarized 121:24 polars 27:16,17 27:18 polymorph 25:21 polymorphs 17:24 18:24 98:2 pooley 87:15 poor 112:2 116:11 poorer 112:9 populations 75:12,20 portion 106:5 portis 2:3 posited 134:5 position 22:9 36:18 65:6 86:23 143:13 positive 64:3 81:7 82:18 83:6 90:6 101:19 110:15 111:17 112:1 113:5 133:14 135:15 170:16 positively 156:10 positives 112:3 113:18 possession 44:17	possibility 25:9 50:19,21 possible 34:22 106:1 136:9 143:10,11 possibly 110:17 post 164:19 potential 69:7 112:11 pounds 67:14 powder 1:6 5:7 7:5 8:7,8 10:12 11:18 12:3 14:12,12,19,22 15:3,16,17 44:10,16 45:1 45:21 57:23 79:3 81:4 119:19 127:8 129:20 130:20 137:22 poye's 60:21 62:3 ppm 85:10 practical 33:24 106:2,6 114:5 practically 115:6 practice 137:16 practices 1:7 precalculated 34:2 preceding 80:18 precisely 13:12	preconcentrates 85:22 precursor 147:9 prefer 127:21 129:11 premier 35:11 prep 115:15,16 116:5,11 117:24 preparation 84:22 115:20 118:1 139:22 prepared 85:2 presence 24:3 47:9 63:18 78:24 79:6,17 85:4 111:13 116:20 119:10 151:14 159:21 167:11,23 173:22 presentation 102:23 103:3 144:22 presented 142:17 presents 33:23 126:13,15 preserve 42:22 43:7,17 prestigious 51:12 presumably 115:8 161:24	pretty 26:1 27:18 38:19 51:11 77:7 86:11 87:3 89:20 103:8 113:13 147:16 149:12 154:5 181:16 183:18 prevailing 105:17 preventing 134:6 179:21 180:2 previous 81:16 previously 30:13 primarily 36:13 39:22 110:4 primary 156:3 prime 105:15 142:8 prior 63:16 85:22 pro 181:19,21 probability 114:10 probably 22:19 37:17 38:20 51:7 64:16 68:21 71:4 75:17 83:14 87:2 89:22 106:12 122:6 127:12 150:21
---	--	---	---

[problem - put]

Page 34

problem 111:18 125:16 128:24 147:6 151:21 152:23 172:18 procedure 33:24 84:20 85:3,21 96:6,7 142:15 145:22 146:2,7 procedures 47:3,8,11 149:17 proceedings 186:4,9 process 50:24 52:9 56:5 72:22 73:7 92:12 122:4 161:23 174:6 178:3 produce 181:17 produced 32:9 32:10 44:15 45:1,21 55:1,6 131:4 181:8 produces 36:1 product 14:14 36:11 63:20 66:22 72:15 83:9 91:17 125:2 133:21 135:9 149:2 164:11 productions 147:9	products 1:6,7 10:10 12:20 36:17 49:2,3 50:9,9 80:19 94:8 117:9 127:14 129:20 165:2 173:11 173:21 professional 129:5 proficiency 60:7 program 60:8 63:12 168:15 172:13,14,19 progress 74:20 project 14:11 15:5,24 46:20 85:5 95:7 106:10 130:19 148:24 166:15 172:3 projects 15:17 prop 15:12 proper 34:16 properly 178:9 property 63:4 64:10 proposed 87:13 104:13,15 110:6 proposing 140:17 proposition 163:2,22	proprietary 86:20 87:1 protection 21:1 protocol 90:13 99:4 113:22,23 138:10 148:12 176:18 protocols 49:9 93:1 113:20 proud 179:17 prove 176:19 proverbial 85:20 proves 84:5 provide 47:15 91:20 180:10 provided 8:5,19 16:24 45:7 46:4 46:21 121:23 172:17 183:5,6 183:8,13 provides 85:7 141:15 province 81:12 psc 3:22 public 126:14 126:16 127:5 172:1,2 publication 30:16,23 35:17 36:14 41:7 publications 56:6 publicly 122:19 122:23 123:7 137:14	publish 118:14 118:18,19 138:19 published 9:16 9:17 35:12 37:8 39:1 56:18 60:3 60:5,19 63:8 74:21 82:21,23 83:12,21 84:1 90:4 110:22,23 113:22 117:15 132:11 138:9 140:2 148:21 publishes 33:22 publishing 90:1 pulled 125:10 pulling 155:6 purchased 14:13,20 15:7,8 15:18 162:6 pure 68:19 147:6,7 purple 164:24 push 169:18 pushback 127:21 pushed 59:3 put 7:16,21 16:2 18:12 19:20 24:24 26:1 32:5 38:4 38:19 42:3 43:13 47:23 48:11 49:19 52:11,16 55:21 57:14 60:11
---	--	---	--

[put - recollection]

Page 35

62:10 71:9 76:16 90:13 101:5 102:7 103:4 105:23 120:20 121:1,3 121:6,7 136:23 138:11 148:11 152:7 157:18 159:15 168:17 176:4,5 putting 91:8 126:9 129:21 133:20 158:7 174:23 puzzling 100:3	questions 15:14 16:20 45:13 54:22 89:22 93:12 158:18 160:10 183:17 186:6 quick 89:21 147:16 169:9 169:21 quickly 99:18 149:12 quid 181:19,21 quit 61:18 quite 119:22 174:19 quo 181:19,21 quote 149:17	37:14 66:23 78:6,7 111:2,3 154:15 158:22 ranges 18:3 33:17 154:2,3,3 161:1 rapid 33:1 rapidly 3:16 10:19 31:15 33:15 rate 113:10 rates 107:22 rather 53:2 ray 87:13 rdr 2:23 read 21:2 34:18 44:20 66:13 85:1 145:8 178:23 reading 66:14 66:16 ready 105:15 116:5 142:8 168:5 really 17:21 18:5 19:23 20:23 21:9,10 47:17,19,20 53:1 59:22 60:14,15,17 61:2 62:21 68:10 71:17 77:18 92:24 93:7 98:1,16 102:14 103:9 105:14 112:16	115:4 120:10 120:11 138:24 142:13 146:18 153:18 165:4 168:6 174:20 175:18,18 178:12 realtime 1:18 186:19 reason 11:4 21:8 36:5 51:11 71:17 98:17 135:16 reasonable 83:18 reasons 33:11 118:20 137:20 rebuttal 15:12 rebutting 25:14 recall 15:13 62:17 94:20 105:5 132:2 147:24 167:8 181:11 receive 106:23 received 14:7 31:12,23 57:22 87:7 107:14 receiving 48:21 recent 16:19 170:6 recently 49:17 recipe 74:15 recollection 95:23
q	quo 181:19,21 quote 149:17		
qc 166:1,5 qr 32:10 40:2 qualified 167:24 quantifying 78:16 quarter 9:16 10:2 178:7 question 6:10 16:16 17:2 32:18 39:5 45:23 47:6 61:23 67:8 70:12,22 71:5 76:13 97:9,9 107:12 126:10 131:7 133:24 151:8 163:20 183:1,4,17	r r 2:1 11:2 63:4 186:1 ra 22:2 race 168:17 railroad 11:23 11:23 raise 107:22 raleigh 64:12 64:13 ralph's 15:9 ran 17:21 52:11 114:22,23 149:5 162:14 range 22:7,10 22:24 24:17 33:5 35:20 36:12,15,20		

[recommendation - report]

Page 36

recommendat... 103:20	reduced 10:13 164:13 186:7	162:16 163:3,8 163:11,24	182:5
recommendat... 103:13	reference 25:7 58:13,18 63:15	165:8	remains 39:12 150:15
recommended 172:18	88:1 91:15	refunds 54:19	remember 37:5 94:19 96:20,23
recommending 141:12,14	references 92:16 134:17	registered 186:19	157:24 166:24 169:7
record 5:2,17 13:8 16:3 27:5 29:8 43:24 54:4 54:8,9,11 66:13 93:17,19,21,23 95:2 107:6,8,10 130:6,7,9,12,15 130:17,18 169:8 170:1,2,4 183:12 184:18 184:21 185:3	referred 8:23 24:4 30:13	regular 90:15 117:8	remote 1:14 5:6 5:13
record's 8:12 29:2 81:15	referring 48:16 65:3 70:1 73:7 73:18 88:17 90:3 92:3 94:15 163:16	regulating 104:11	remotely 5:11 5:12
records 48:3 174:9 175:3 180:3,12	reflect 27:5 29:8	regulation 113:1	remove 52:10 52:18 149:8
recovery 74:14 76:14 113:10	refractive 3:13 3:16 9:21 10:19 22:19 23:16,23 24:10 31:6,16 32:7,12 33:4,13 33:16 34:23 35:14,21,23 36:8,16 37:3,9 38:21 42:15 67:1 69:5 72:3 72:15 78:13 83:9,11 96:11 110:7 122:8,9 122:15 125:14 153:21 154:2 154:13 155:22 156:21 157:6 157:13 158:13 161:20 162:1	regulatory 34:20 42:9	renzi 2:12
red 2:11 22:12 164:24		reilly 2:14	repeat 107:12 135:22 148:9 151:8
redact 181:9,18		reject 56:19 85:24	repeatedly 34:17
reddish 25:24		rejected 56:7 56:22	repeating 64:22 80:6
redirect 60:18 93:9,10		related 44:8 56:5,10 179:14	rephrase 17:15
redo 73:23 119:4		relates 131:5 173:11	replicate 176:13,19
reduce 112:15		relation 107:15 183:7	report 4:5,7,9 7:5,8,22 8:24 10:8 11:12,19 11:20 12:4,7,11 12:15,21 13:16 13:21 14:4,10 15:12,15,24 25:12 48:17,20 49:18 57:16,22 58:7,7,13,22 59:13 65:24 69:15 70:1
		released 84:4	
		reliability 59:12	
		reliance 4:3 11:6 57:2	
		rely 36:5,13 58:20 60:24 171:12	
		relying 15:13 31:2 40:8 82:10 82:12 157:4	

[report - right]

Page 37

79:12,18,22,23 82:2,3,7,9 84:13,19 85:3,6 87:7 94:6 95:15 96:9 99:14 111:23 130:20 130:22 131:2 133:4 164:4,9 178:23 180:17 180:24 182:6 184:2,4 reported 79:11 121:18 reporter 1:18 2:24 5:18 53:22 54:1 144:15 169:7 186:19 186:19 reporting 5:13 reports 20:20 25:6 48:19 49:10,22 85:9 94:4,8,20 166:9 173:1 177:4 178:1,17,18,20 178:21,24 representative 66:21 177:17 represents 131:3 186:8 request 9:10 16:22 44:15 47:1 required 42:9 113:5 118:13 137:12	requirement 85:20 research 19:8 47:12 103:13 106:10,15 110:3 132:21 136:14 167:16 resolution 62:8 62:11,11 92:8 resolved 76:12 respect 32:20 40:4,7,9 92:1 105:3 respected 114:3 response 9:14 16:19 44:12,14 49:23 50:1 responses 43:4 43:14 44:7,22 responsive 44:19,24 45:20 rest 26:3 result 50:24 85:19 186:13 results 13:4,18 62:175:23,24 76:9 79:11,15 79:15 80:1,4,15 80:19 82:6 83:6 90:7 100:4 110:10 138:20 160:12 170:7 172:1 retainer 54:18 107:22	retains 14:6 80:15 return 102:18 reversed 117:19 review 43:15 43:20 57:2 reviewed 30:16 32:23 35:12,17 36:14 41:6 63:9 82:22 83:13 90:2 122:17 revision 10:21 13:17,24 14:4 reynolds 136:14 148:24 rg 7:24 8:6,9 67:14,17,24 68:2 99:12,12 99:13 152:20 153:23 154:1 159:17,23 160:3 ri 22:7 34:4,4 34:16,22 35:9 36:3 39:13 ribbony 125:15 rico 108:8 rid 48:23 52:22 53:5 135:5 right 9:5 10:15 11:8 13:5 16:16 17:1,4 18:17 25:10 27:21 29:3 30:11 35:11 36:4	39:23 40:12 41:19 42:19 45:17 47:1 48:1 48:17 49:9,9,10 50:2 53:13 54:21 55:22 56:21,24 57:10 57:15 61:18 69:17 70:2,4,9 70:10 74:15,21 75:4 77:7 78:4 78:13 79:8,10 79:18,20 80:16 81:14,23 87:22 88:2,6,21 93:13 97:8 98:8 102:24 105:7 105:12 106:4 108:2,2,11,15 108:22 111:1,5 111:14 113:16 116:21,22 117:2 123:19 125:7 126:4 128:17,19 129:19 130:11 137:12 138:17 140:3,16,20 143:4 144:4,11 144:11 145:7 149:10,11,18 150:1,5 151:2 157:17 159:8 160:15 161:17 161:22 166:12 168:10 172:9
---	---	--	--

[right - screen]

Page 38

173:20 ring 94:17 151:18 ris 7:23 10:9 12:5 35:4,21,23 rj 14:9 91:12,17 181:13 rmh 2:16 rmr 186:18 robinson 1:17 2:23 186:18,18 robust 73:2 rolle 87:12 room 6:15,16 roth 2:10 roughly 131:13 rounds 172:22 172:22 173:9 routine 42:12 routinely 63:1 64:9 rpm 148:13,14 rpr 2:23 186:18 rugs 176:6 rule 34:21 ruled 25:8 run 20:23 177:15 running 50:3 résumés 177:13	46:18 48:21 73:8,11 84:21 85:18,18,24 87:4 112:15 115:15,16,20 121:17 132:20 139:22 148:16 152:6 161:14 170:14 173:2 samples 8:8 11:23 12:13 24:2,5 42:12 46:7,10,12 47:8 51:23 59:19 62:13,24 64:2,3 65:10 66:18 67:15 69:21 79:3,6,16,24 81:17,20,21 82:16,17 98:3 110:5,12 111:10 115:23 119:1,10,17,18 119:19 133:14 135:15 138:1 159:20 160:7 167:10 171:6,6 171:7,17 173:2 173:4 178:5,6,7 sanchez 14:9 37:5,6 59:15 128:11 129:2 satisfied 73:21 120:19 satisfy 174:14	satterley 12:10 15:1 170:21 save 180:4 saw 39:20,20 39:21 88:12 99:15,16 100:23 135:14 136:5,13 153:8 153:8 170:6 173:10 saying 15:13 19:15,16 29:13 29:24 35:18 39:17 79:7,8 91:10 104:9 105:21 114:4 121:12 123:3 124:3 125:22 125:23 128:8 133:5 143:16 151:10,17 153:1 160:12 169:22 175:22 183:5 says 21:4,14 24:14 27:22 28:9 33:22 34:18,19 37:11 41:4 53:4 86:22 98:18 123:19 137:1 149:4 176:16 scan 28:20 schedule 178:12	school 51:13,20 83:5,19 84:21 85:2 88:16 90:12 97:21 98:18 99:4 102:6 106:12 109:9 110:1 111:8,11 135:19 136:3 139:5 148:1,18 149:22 150:1,4 150:8,14 153:11 schools 173:1,2 173:3,5 175:16 science 16:9,10 59:1,3,5 82:13 92:1 115:5 124:20 125:9 129:11 139:5 139:20 scientific 75:22 83:18 124:19 132:7 134:2,6 137:16 scientist 36:7 51:21 82:22 116:4 121:16 121:22 125:1 scientists 114:3 121:20 147:3 scopes 115:18 screen 6:24 18:12,15 43:12 145:13,15
s			
s 2:1 186:18 sales 1:7 sample 12:9,9 15:21 34:16			

[screw - shelf]

Page 39

screw 23:10	120:2 145:12	122:2 125:23	113:9 114:1
scroll 27:1	147:2 152:3	159:3	116:21 127:1
scrutinized 127:18	158:8 163:14	sensitive 63:3	132:6,23 133:1
scrutiny 124:18	174:6 175:5,8	76:18 87:10	133:6 134:3,7
sdivita 2:16	177:20 178:5	91:22 100:12	136:12 138:24
seagrave 14:9	183:21	104:18 117:17	139:8 140:2,5,9
37:5 49:8	seeing 12:22	sensitivity	140:15,19
128:12 129:3	24:7 27:7 36:9	78:18 112:9	141:22,23
second 4:9 6:14	37:13 38:22	114:16 129:12	143:3 145:5
9:16 44:3 57:13	69:5 72:3,19	145:10,18	150:18
58:13 96:21	78:11 102:12	sent 9:9 12:10	sepiolite 159:1
105:22 107:4	120:16 127:23	12:12 14:8,21	september 8:3
113:6	152:12 153:2	42:2 44:1 104:9	13:23 68:15
secret 91:21	153:20 154:9	sentence 85:14	sequence 158:1
section 11:6	156:4,7,23	sentences 44:20	series 99:23
12:1 21:2 47:16	160:7 161:19	separate 86:18	serpentine
48:12,14,16,17	seems 165:15	101:11 105:19	21:21,21,22
66:4 84:18	181:19	106:1 136:9,11	services 6:13
105:22 164:4	seen 21:7 23:1	138:24 139:1	session 96:21
164:14	39:8 88:16,19	139:15	set 35:6 71:13
see 6:24 13:18	127:19 133:7	separating	79:23 178:12
18:3,13,14	154:16 159:23	132:20 134:19	seven 119:1
20:16 22:23	162:21 171:8	separation 4:11	sg 7:24 10:10
23:15,19 26:11	select 34:15	60:3,9 61:1,22	36:11 39:20
31:11 33:17	selected 46:21	62:2 63:11	50:15 65:22
34:13 36:21,22	selection 41:13	64:15 73:19	66:15 68:10,14
41:9 42:17 44:7	sell 139:12	74:10 75:7 81:9	70:10 71:14
66:20 70:9,17	sem 47:5	83:2,20 85:8,12	73:12,15 74:8
72:2,18 73:16	113:24 137:4	86:5,7,19 87:17	99:12 101:6
75:10,13,17	send 137:24	88:5 89:6 91:3	153:24 154:7
76:3,20 80:14	138:4	91:13 92:20	156:9 159:23
91:9 95:17	sending 91:3	100:2,6,11	164:11 165:1
98:13,19	138:3,4	101:23 103:14	share 43:12
114:23 115:23	sense 100:20	103:21 104:12	shawn 14:18,20
116:6,7 117:11	102:17 116:4	105:7,19 109:7	shelf 12:9 14:11
	116:23 121:13	111:14 112:20	14:23 15:16

[shelf - sorry]

Page 40

81:4 147:12 shelved 86:11 short 130:1,1 shorthand 186:6 shortly 95:3 shoved 24:13 show 25:23,23 47:24 50:3 55:11 57:6 65:17 82:17 91:13 105:13 127:22,22 129:13 131:9 139:7 142:13 150:20 154:20 176:12 178:22 179:1 showed 16:23 83:6 99:1,3 100:7 136:8,10 149:5 shower 12:3,3 44:10,10 showing 9:13 20:21 52:5 78:10 82:13,24 100:4 154:1 shown 40:16 64:7 134:13 171:10 shows 121:24 132:24 163:9 177:17 shu 3:12,16 9:17	sic 35:4,5,24 37:3 40:22 46:13 86:20 87:15 96:11 122:9,10 132:12 154:13 side 22:13 156:22 179:20 sides 181:8 182:1 sieve 162:15,15 163:17 signature 186:17 signed 51:19,21 significant 110:15 111:22 125:20 significantly 35:4,13 165:11 165:13 similar 50:7 66:23 153:20 153:21 161:20 162:20 simon 12:13,18 12:23,23 13:1 simple 38:5 101:4 single 75:11 108:4 137:13 155:2 sir 20:7 70:7 88:12 sit 77:21 144:10	sitting 6:14 38:10 77:1 112:15 114:21 six 58:1 108:6 108:10 124:2 sixed 83:14 size 7:23 10:9 10:13 12:6 18:22,22 65:21 66:3,23 67:2,17 67:24 75:19 98:10,10 112:23 141:4 146:23 152:3 153:3,5 154:21 155:3,11,17 156:1 161:19 161:19 162:13 163:6,14,16,17 163:18 164:11 164:13 sizes 153:21 162:20 slide 21:13 26:6 26:7 145:24 149:9 152:8 slides 144:20 slight 47:12,12 small 6:14 50:4 67:17 68:8 98:12 99:15 100:14 120:17 156:17 smaller 50:11 100:7,7 155:9 163:14	smallest 75:17 smell 176:8 sold 64:12 129:15 solely 110:7 solid 112:16 soluble 102:2 solution 146:13 146:24 147:11 solve 115:2 solving 114:20 120:11 somebody 177:5 something's 114:13 somewhat 68:1 soon 17:21 174:22 sooner 127:17 sop 175:7 sops 47:3,18 48:2,3 175:5 177:24 sorry 8:12,21 13:1 28:5 29:9 39:7 40:5 48:5 48:9 55:2 67:7 70:12 73:6 74:3 74:23 79:24 81:24 88:8 91:5 94:4 95:20 104:14 130:16 133:23 135:22 136:20 138:15 140:12 151:7
--	--	--	--

[sorry - stenographic]

Page 41

157:4 159:10 164:7 175:12 175:14,21 183:19 sort 19:11 54:20 129:8 177:9 source 10:11 20:13,17 sourced 80:21 space 156:15 spalding 2:18 speaking 5:14 specific 44:12 45:13 50:24 86:24 150:13 specifically 60:4 80:3 86:17 184:3 speculating 142:24 184:10 speed 52:17 spend 51:14 58:5 117:13 125:4 133:3 spending 52:21 spent 19:8 62:12 107:24 spike 8:14 68:17 69:11 70:13 spiked 8:7,9 66:15 70:10,16 71:6,12 spiking 73:10	spin 49:1 100:23 spinning 115:21 split 13:23 splits 81:6 springs 15:22 spun 101:7 square 155:12 sr 35:5 srm 42:16 stack 46:5 stacks 7:1 stages 32:8 151:3,13 stain 86:20 146:12,14 149:10 stained 149:8 staining 3:12 3:17 9:20 10:21 27:15 31:4,17 32:8,13 86:20 stainless 162:7 standard 3:8,10 7:24 8:14 10:14 17:8,9,16 18:14 20:5 21:16 26:7 26:12 27:10,19 27:23 29:15,16 30:2,3,5,6 33:8 33:8,14 35:5,14 47:3,7,10 52:12 65:17 66:3 71:16,22 73:1,5 73:6 74:12	92:16 98:6 99:7 151:16 152:13 152:15,19 153:24 156:5,7 160:13 161:12 161:15 162:6 164:14 175:20 standardization 8:16 standardized 59:21 standards 16:18 18:3,4 20:12,14 50:3 52:11 60:11 98:23,24 99:20 113:3,21 114:23 136:16 146:19 149:5 154:20 160:4 176:4 stands 69:21 start 33:14 54:15 66:23 76:22 90:9 109:12 114:14 129:10 133:13 133:19 174:22 174:23 184:14 started 17:22 17:22 18:21 51:10 78:23,23 79:2 88:21 97:15,17,22 98:5 99:17,19 101:21 112:19	113:16 116:18 117:4,7 120:10 135:16 153:17 153:19 154:6 158:6,7 159:4 starting 8:9 9:15 80:22 84:20 starts 108:23 109:12 134:18 state 44:23 60:6 63:7 91:22 162:7 stated 33:20 36:7,19 37:2 105:24 112:24 144:11 statement 35:2 35:16 36:4 45:19,24 46:1 51:22 52:17 106:4 states 1:1 44:12 87:8,12,18 96:16 stating 35:12 37:8 status 166:18 166:19 stay 40:17,18 stayed 114:5 stays 89:13 steel 89:8 162:7 steering 43:4 stenographic 5:17
---	---	---	---

[step - take]

Page 42

step 47:23 48:12 120:18 stephanie 2:15 steps 116:1 174:13 sticking 101:20 stop 24:16 92:10 98:22 169:12 184:15 184:18 stopped 152:17 156:18 store 129:17 139:13 story 97:13 102:22 straight 101:13 straightforward 60:1 102:6 154:5 street 2:3,7 strike 65:15 struck 61:6 structure 7:23 10:9 12:6 122:11 141:6,7 156:5 164:10 structures 8:17 18:23 68:2 75:13 98:10 100:8,14,15 120:17 156:17 struggling 91:1 stuck 19:11 142:18	studies 182:5 184:1 study 72:12,20 stuff 10:7 11:10 67:18,18 68:8 87:23 106:17 108:1 109:3,11 139:1,14 148:9 162:20 su 3:12,16 9:17 30:11 31:2,4,15 36:4 37:22 39:4 156:24 165:10 su's 10:16 33:15 40:17 158:20 subcommittee 105:2 subject 45:11 submitting 124:18 subparts 44:12 subpoenas 174:24 subset 104:24 sufficiency 92:19 suggested 19:3 19:3 24:24 37:1 suggesting 128:1,4 suggestion 121:8 155:10 suite 2:7,14 suites 34:1	sup 52:16 supervision 186:8 supplement 7:4 7:7 10:8 11:12 11:20 12:4 13:15,21 14:10 15:15 57:22 65:23 164:3,9 supplemental 4:5,7,9 15:24 57:16 58:7,13 79:22 82:9 94:5 131:2 180:17 180:24 182:6 184:2 supply 174:23 support 104:10 104:22 163:1 163:22 171:13 supposed 37:15 100:12 147:14 supposedly 143:3 sure 8:22 11:9 18:1,23 20:2 21:19 26:20 29:2 42:3 48:8 65:1 69:24 74:15 78:22 80:9 81:15 99:20 114:9 130:4 138:10 148:21 151:21 152:23 157:18 162:5 163:15	168:19 169:12 169:20 170:24 183:12 surface 101:18 101:19,22 135:3,4 176:7 surfactant 52:7 135:2 surfactants 135:7 surprising 61:3 suwanee 15:19 swear 5:18 sworn 5:12,23 system 63:24 77:7,10 t t 186:1,1 table 8:6,9,23 10:3 36:1 37:18 37:20,21 38:12 38:20,24 39:2,8 41:13 69:20 70:9 158:20,20 159:13 tables 12:2 30:24 32:9,15 34:2,8 40:1 79:23 176:6 184:3 tad 27:1 take 17:13 18:7 23:20,20 24:15 37:23 38:23 53:17,19,20,20
---	--	---	--

[take - tem]

Page 43

53:24 59:8	101:7,10,19	145:24 172:6	87:14 132:19
66:22 93:15	104:11 105:20	172:10	techniques
94:23 98:3,20	106:2 109:24	talked 36:7	86:24
115:23 116:1	110:2 111:13	70:16 83:1	technology
119:2 120:12	114:7 115:11	85:13 94:3	33:8 86:18
120:13,14	116:19 117:22	103:8 105:4	tecum 42:21
130:1 139:4,7	118:6 121:9,17	124:16 132:5	43:7
152:6,7 169:9	122:1 124:5,11	151:15 161:21	tedious 110:24
169:21 174:13	125:18,19	163:13 174:2	111:1
179:9	126:3,12 128:3	talking 45:18	tell 5:23 70:24
taken 1:15	131:5 133:19	45:18 48:9 58:6	103:24 129:15
83:21 186:5	134:11,24	64:18 68:13	132:15 135:10
takes 106:19	135:2 136:9,11	73:10 74:5,19	155:20 158:12
156:15	137:3 139:10	75:2 76:13 99:1	158:17,18
talc 4:12 8:1	145:6,19	104:15 108:11	164:15 170:11
10:11,13 12:2	146:12,14,24	108:14 117:3	174:13
12:20 14:1,3	149:3,16	119:7 124:6	telling 26:13
18:1 19:6,9,15	151:14 152:2	131:12 134:18	105:5 141:20
20:1,22 23:19	152:12 158:23	139:18,24	tem 18:7 47:5
24:2 25:3,3,4,5	159:20 161:23	142:24 145:10	60:15,17 73:14
25:7,11 39:22	163:17 165:18	149:17 151:2,4	73:17 74:7 75:9
47:8 50:23	167:10,22	151:13 153:3	75:10,24 76:4
51:15,23 56:5	171:17 172:3	157:24 160:18	76:16 77:12
56:10,23 60:4	173:11,19,21	170:9 174:22	78:17 79:1,4,6
63:16,18 65:9	179:14	talks 41:13	79:16 82:17
66:9 68:18,22	talc's 129:14	145:17	90:14,21 91:16
68:23,24 69:6	talcs 36:10 72:4	tamara 11:17	96:14 99:3
69:10 70:14	140:22	target 15:21	111:18 112:21
71:12,14,22	talcum 1:6 5:7	te 114:12	113:9,14,16,24
72:14,16,17,18	8:8 14:12 44:16	teach 139:5	114:12,15,17
72:20 73:8,8,11	45:1,21 127:8	technical	114:23 115:16
74:1,2,17 77:16	talk 56:11	114:20 148:8	115:24 116:21
78:24 79:3,5	60:18 97:12	technically	117:1,4,16
80:4,19 85:4	103:6,17 104:9	91:7	118:1,7 120:20
94:8 97:24	106:21 121:7	technique 3:12	137:4,9,17,22
98:11 99:21,21	129:6 140:14	9:20 31:5 59:21	138:2,11,12

[tem - time]

Page 44

141:2,12 145:17 146:2 170:8,13 171:3 171:9 172:22 173:12,18 178:5 179:5 tems 119:4 ten 53:10 110:14 184:15 tension 135:4 tenths 75:15 test 79:11,15 80:1,15 82:6 87:13 120:9 171:24 tested 120:4 testified 6:1 59:16 117:5 142:5 179:14 183:9 testify 77:22 83:17 160:2 176:23 testifying 18:18 106:22 174:12 testimony 11:7 24:1 67:4,9 77:1 88:15 104:19 120:8 129:1 142:9 143:9 151:18 testing 44:9 46:4 47:4,8 53:2 59:12 60:8 82:10 92:19 140:16 170:7	170:12 171:5,9 176:17 180:21 tests 94:7 130:13,15 180:16,23 181:2 thank 7:21 16:15 102:20 131:21 144:18 185:1 thanks 13:14 that'd 141:2 theoretical 106:5 theoretically 106:1 theories 76:7 100:21 theory 115:6 161:22 165:6,9 thereto 186:6 thick 154:24 thickness 154:23 155:11 thing 7:13 61:3 72:2 73:14,17 75:13 97:3 129:18,22 131:8 159:1 161:17 168:11 173:8 175:4 180:7 things 51:3 65:19 88:20 94:2 103:5 114:4 119:21	137:2 143:22 160:19 166:17 176:6 think 10:1,2 11:8,15 15:6 16:10 28:7 29:13 31:24 34:12 35:1 38:2 38:19 39:19 41:10 47:21 48:10 50:5 52:5 52:13 53:7 54:18 59:3,4,14 59:16 65:21 68:6 70:5 71:8 72:23 76:1,21 77:7 80:23 81:2 81:21 86:10 87:6 89:4 93:9 99:5 101:1,2,11 102:13 105:8 108:7,9,19,20 110:6,13,20 111:7,22 112:22,24 114:19 115:14 117:6 120:2 123:12 125:1,6 127:4,6,10,13 127:23 128:9 131:17,20 133:21 134:10 142:12,13 150:8 154:15 160:22 161:3,5 163:19 166:14	167:5 169:5,19 170:22 172:2 175:14 179:18 181:12,22 thinking 87:4 129:19 132:4 135:7 143:8 third 10:2 11:20 166:13 thirteen 110:12 110:14 thought 26:9 77:9 84:15 86:6 105:17 113:7 134:12 135:20 144:9 159:18 159:22 162:14 172:6 181:15 thousand 108:3 115:19 116:2 155:5 thousands 124:1 thousandths 152:2 155:8 three 20:18 64:1,2 72:23 81:6,16,19 110:16 111:9 147:11 165:23 165:23 169:21 176:2 thumb 34:21 tiles 101:14,14 time 5:6 17:20 18:5,20 19:8
---	--	--	--

[time - two]

Page 45

20:6 21:7,7 24:14 27:8 36:21 47:18 49:1 53:13 54:8 54:11 58:5 62:3 62:12 64:18 65:2 73:3 81:13 93:19,23 97:20 99:10,17 100:5 100:6,23 102:4 103:16,19 105:15 106:18 107:10,24 108:8 110:9 111:12 114:22 114:23 116:18 117:4,5,13 118:22 120:5 120:10 125:4 128:18,23 130:6,9 133:4 136:13 138:6 142:9 144:12 145:22 146:8 148:18,20,22 148:23 149:6 152:10 158:9 165:24 166:20 166:23,24 167:6 168:1,5,8 168:22 170:1,4 180:5 181:7 185:3 times 21:2 51:22 97:10 112:24 113:7	154:17 155:9 tired 168:22 title 26:7 27:22 145:4 titles 177:14 today 6:11 38:10 57:22 61:18 77:2,21 133:4 142:6 147:18,19 149:23 150:16 today's 5:5 together 38:20 60:11 71:9 105:24 108:8 129:6 131:3 136:23 138:12 181:24 told 16:21 89:17 90:10 103:18 105:10 125:3 126:21 128:15 129:9 143:22 159:18 160:10 172:9 tomorrow 94:23 took 24:6 110:9 110:19,24 135:13 162:6 162:15 top 22:2 26:11 83:2 89:12 101:9,14 trace 62:24 65:9 139:19	153:10 track 168:17 tracking 13:11 trailed 16:18 trainees 168:3 168:4 training 168:8 168:14 177:9 transcript 186:4,9 transcripts 134:13 transposed 28:8 transverse 76:5 tremolite 52:18 52:19 60:9 63:10 64:3 85:5 135:8 162:10 trial 88:11 trials 179:15 trick 131:7 tried 99:7 135:14 137:21 true 45:24 46:1 68:5 186:9 trump 52:16 truth 5:23,23 5:24 try 18:12 37:17 56:16 109:5 112:20 115:11 131:20 138:1 trying 29:1 49:6 50:7 52:6 53:4 70:23 78:9	88:21 91:5 97:15 110:23 111:7 135:5 139:15 148:6,9 151:11,18 152:24 tube 101:12 tunnel 101:12 turn 48:3 98:7 turned 68:4 turnover 48:8 turns 152:2 tutley's 13:23 tv 132:22 tweaked 144:7 tweaking 150:10 tweezer 149:7 tweezers 152:7 two 14:22 15:15 17:23 19:14 20:18 23:6 30:11 32:14,15 34:1,4 35:18 38:18 46:14 50:2 75:12,16 75:20 80:14 81:6 97:7,18 109:16 110:16 115:19,21 121:11 130:13 130:15,18,24 139:2,16 147:10,11 155:4 160:18 169:21 174:7
---	---	--	--

[type - validate]

Page 46

type 32:14 59:5 63:22 85:11 152:3 176:16 types 34:4 50:22 72:3 110:4 typical 36:20 67:22 typically 23:14 30:18 36:23 39:18 177:13 typo 8:11,13,23 typographical 7:8 typos 7:12	127:7 151:9,11 184:8,9 understanding 16:3 21:15,23 22:6 77:15 151:7 171:24 174:4 177:10 understood 142:7 167:20 union 10:10 36:11 99:11 153:18 164:11 unique 132:8 united 1:1 university 51:13 106:11 127:17 unnamed 166:13 unscientific 63:13 unusual 62:23 76:9 update 147:19 updated 3:22 42:20 43:5,14 43:15 55:16,19 55:24 96:1 uploaded 55:13 upper 22:13 use 34:5 37:3 52:1,2,16 64:14 85:14 91:12 97:22 98:3 99:7 103:20 104:18 111:15 113:23	113:24 115:11 117:13 123:4 132:3,5,12,19 135:19 136:2 137:1 138:23 146:15 147:18 148:1,10,19 151:4 153:24 155:20 156:19 161:15 used 21:16 35:9 52:7 63:24 67:1 81:13 85:14,15 86:18 87:6,24 88:3,6,10 98:22 98:23 104:12 111:12 113:13 136:4,8,16 139:4 144:5 147:13,23 148:2,24 158:12,19 161:9 168:19 171:21 uses 107:1,16 using 3:17 10:20 31:17 37:16 48:13 49:2,9 51:15 60:2,8 63:9,10 74:8,8,12 77:2 77:6,9 78:8 79:1,3 81:8 85:7 88:14 91:15 92:7 93:1 96:14,17 97:22	98:15 102:2 109:23 110:2,5 111:9,20 115:15,18 116:20 118:6 118:24 119:5 119:24,24 120:1,1 122:18 126:3,24 128:16 129:20 132:11,13,16 134:6,18,21,22 135:1 136:11 136:15,22 146:7 147:5 148:22 150:17 150:23 151:15 152:14,19 154:6 156:6,14 157:9,12 160:13,14 161:13,14 170:17 171:9 171:17 usual 50:8 162:19 usually 53:24 64:17 67:14
u			v
u.s. 63:22 um 121:19 178:22 unable 68:8 unclear 63:12 78:21 uncomfortable 168:15 under 42:8 76:4 76:11,16 77:14 86:16 174:14 183:14 186:7 understand 8:22 58:24 65:18 76:10,10 86:23 88:4 105:16 121:11 122:3,4,5,6 124:4 125:21	127:7 151:9,11 184:8,9 understanding 16:3 21:15,23 22:6 77:15 151:7 171:24 174:4 177:10 understood 142:7 167:20 union 10:10 36:11 99:11 153:18 164:11 unique 132:8 united 1:1 university 51:13 106:11 127:17 unnamed 166:13 unscientific 63:13 unusual 62:23 76:9 update 147:19 updated 3:22 42:20 43:5,14 43:15 55:16,19 55:24 96:1 uploaded 55:13 upper 22:13 use 34:5 37:3 52:1,2,16 64:14 85:14 91:12 97:22 98:3 99:7 103:20 104:18 111:15 113:23	113:24 115:11 117:13 123:4 132:3,5,12,19 135:19 136:2 137:1 138:23 146:15 147:18 148:1,10,19 151:4 153:24 155:20 156:19 161:15 used 21:16 35:9 52:7 63:24 67:1 81:13 85:14,15 86:18 87:6,24 88:3,6,10 98:22 98:23 104:12 111:12 113:13 136:4,8,16 139:4 144:5 147:13,23 148:2,24 158:12,19 161:9 168:19 171:21 uses 107:1,16 using 3:17 10:20 31:17 37:16 48:13 49:2,9 51:15 60:2,8 63:9,10 74:8,8,12 77:2 77:6,9 78:8 79:1,3 81:8 85:7 88:14 91:15 92:7 93:1 96:14,17 97:22	98:15 102:2 109:23 110:2,5 111:9,20 115:15,18 116:20 118:6 118:24 119:5 119:24,24 120:1,1 122:18 126:3,24 128:16 129:20 132:11,13,16 134:6,18,21,22 135:1 136:11 136:15,22 146:7 147:5 148:22 150:17 150:23 151:15 152:14,19 154:6 156:6,14 157:9,12 160:13,14 161:13,14 170:17 171:9 171:17 usual 50:8 162:19 usually 53:24 64:17 67:14 v v 63:22 vague 121:5 valadez 12:8 46:16,17 validate 37:4

[validated - weeks]

Page 47

validated 119:3 149:14 validates 35:17 37:7 validating 92:12 validation 149:17 values 22:3,7 variables 38:18 various 100:21 110:4 149:21 179:15 verbatim 38:13 verification 85:11 verified 63:13 160:24 verify 33:4 98:20 99:8 116:16 160:23 verifying 78:13 81:10 vermiculite 63:5,16,19,23 64:2,3 65:3,7 136:23 vermont 51:5,6 51:8,15 52:20 81:16,20 82:1 119:17 135:9 149:3 161:11 version 11:11 31:12 55:12 151:17	versus 22:21 34:10 62:15 112:6 114:7 115:15 117:8 124:5,8 155:23 victim 58:1 video 1:14 5:6 videoconfere... 1:15 videographer 2:22 5:1,4 54:7 54:10 93:18,22 107:9 130:5,8 169:24 170:3 184:20 185:2 videotaped 42:20 43:6,16 view 32:18 154:22 violate 16:12,12 visible 52:3 visual 156:16 156:19 vitae 3:24 voc 176:16 vocs 176:1,8 volatile 176:1,9 volume 9:16,18	walk 97:14 129:17 walter 161:3 want 8:22 15:14 16:2 19:13 39:23 52:1,1 53:17,20 53:23 68:20 70:24 71:11 76:18 77:10,10 78:14,17,17 79:20 81:14 84:6 89:21 91:2 97:12 101:1 113:24 118:18 123:10,17 125:2 138:11 164:18 169:9 169:10,15,20 169:20 172:10 177:2,3,4,20 178:3,5 183:8 183:12 184:15 wanted 18:1,23 26:20 68:19 69:2 94:2 99:20 103:3,12 114:9 130:17 168:16 warp 52:17 wash 146:14 washington 2:8 wasting 172:20 173:6 watch 132:23 water 89:10 102:2 146:14	wavelength 34:3 38:5 wavelengths 24:12 38:16 161:4 way 6:9 8:10,18 23:16,23,24 27:5 29:18 30:20 37:22 55:14 71:14 72:23 73:13 74:16 78:7 80:12 84:7 89:5 98:19 101:16 101:21 115:3 116:15 120:24 121:2,10 158:5 163:6 we've 8:19 16:9 16:11 19:23,23 20:3 22:13,24 23:5 30:2 32:1 45:7 53:7 67:12 67:13 72:3 73:15 93:13 101:22 106:17 119:17 129:24 149:20 162:19 169:8,19 178:24 183:13 184:12 website 173:10 week 97:6 weeks 97:18 108:13 109:17
	w w 63:4 w.r. 63:21 waiving 44:13 walgreens 15:20		

[weighing - yeah]

Page 48

weighing 48:21 48:24	withdraw 61:23 90:4,5	147:15 152:9 158:2 170:23	worried 7:19
weight 72:6 141:2,12 149:16	withdrawn 40:6 50:20 79:14 118:4	173:3 175:24 176:20 181:17 183:7 184:12	worse 102:12
weirick 12:17 81:22	138:15 157:2 180:22 183:19	worked 67:13 86:21,24 98:5	worthless 111:16
welcome 45:12	witness 5:11,19 5:22 28:4,13,19	109:10 144:4 146:18 151:5	wrap 151:11
went 13:19,19 31:24 36:3 39:19 56:12 64:4,13 65:24 99:6,9,23 100:17 101:22 117:6 120:11 149:12 169:7 172:14 179:22	53:11 54:5 61:9 61:13,17 69:16 145:14 186:10	151:19	write 55:21 138:6
white 139:10 140:11,13 141:24	wolfson 16:4 61:6,8 92:4,14 93:7	working 33:7 56:9 63:16 71:16 97:15 102:3,24 103:12,22,24 105:11 106:13 108:24 109:13 113:11 126:22 127:2 128:2,9 141:10 142:7 142:21 143:1 143:15 144:22 147:12 165:6,9 166:20,22 167:6 178:9	writing 186:7
whites 22:14	wolfson's 58:19		written 22:3 47:18
wide 75:16,16	won 128:13		wrong 24:12 25:15 121:9 128:16 143:16 143:21 144:3 153:9
width 66:6,10 122:10,11,14 154:3 155:21 155:23,24	word 91:10 123:4 152:5		wrote 104:20
william 1:14 5:9,21 8:2 11:13 42:21 43:6	work 23:21,22 49:6,13 54:14 54:17 59:5,11 63:15,17 65:7 67:23 68:8 74:20 75:8 77:20 79:8 95:24 97:14 102:14 103:22 106:6,7,17,18 106:22 108:12 115:7 117:6,8 118:10 119:7 123:16 127:11 131:12,14,24 132:1,3 135:11 140:10 147:2		x
willing 83:17 122:23 123:6 174:11 176:23		works 134:4	x 3:1 4:1 87:13
windsor 136:13 148:24		worksheet 158:10	xrd 63:24 64:11 111:12,15,24 112:2 113:24 137:4,9
		world 122:17 127:9 133:5 134:6 135:11 161:5 171:16	y
		worlds 115:16	y 155:15
		worldwide 87:20 133:19	y'all 127:13
			yardley 87:16
			yea 103:6
			yeah 7:19 10:3 11:14 15:7 19:22 22:16 26:23 27:12 28:23 32:1,3 53:12 54:15 69:20 81:18,19 82:16 93:15

[yeah - zoom]

Page 49

94:24 111:15 123:23 124:7 136:1 140:17 141:1 142:23 151:9 153:5 157:11 169:18 169:23 175:15 182:12 year 51:14 95:18 131:17 167:2,4,4,5 173:16 176:21 yearly 176:24 years 16:8 19:15 20:18 35:19 46:14 55:20 82:14 92:2,4 93:2,2,2 112:22 117:3 134:14 136:23 157:16,24 158:2 yellow 24:22 40:18,18,18,19 40:23 124:7,8 yellowish 155:2 yellows 41:1 yesterday 43:21 44:3 york 2:19,19 60:6,7 63:7,12 92:18 96:15	zeros 9:4 71:15 72:23 zimmerman 15:23 81:22 zoom 1:15 29:6 29:22
z	
zero 8:24 10:3 108:3 155:15	

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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